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NAUTIC TABLES;

CONSTRUCTED

AND

CALCULATED

BY

SAMUEL DUNN,

Teacher of the Mathematical Sciences, LONDON.

LONDON; Printed for the AUTHOR, MDCCLXXXV.

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BRITAN
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I.

A Table of Proportional Differences for Common Logarithms and Natural Numbers.

In this Table, under the Word Diff. are the Differences which are under D. in Common Logarithms. At Top, from 10 to 90, are the intermediate Tens which are not written, but underſtood to be between one Natural Number and another, at Top of Common Logarithms. At the Angles of Meeting are the Logarithmic Proportional Differences, and omitting the firſt Figures or Units in each of theſe, the Others are Logarithmic Differences for the Units of Natural Numbers. Conſequently, the Logarithmic Differences for Natural Numbers from 1 to 100, may be had from this Table by Inſpection. The Natural Numbers for Logarithmic Differences, are found in like manner by Inſpection.

Diff.	10	20	30	40	50	60	70	80	90
42	4	8	13	17	21	25	29	34	38
44	4	8	13	17	22	26	30	35	39
46	4	9	13	18	23	27	32	36	41
48	4	9	14	19	24	28	33	38	43
50	5	10	15	20	25	30	35	40	45
52	5	10	15	20	26	31	36	41	46
54	5	10	16	21	27	32	37	43	48
56	5	11	16	22	28	33	39	44	50
58	5	11	17	23	29	34	40	46	52
60	6	12	18	24	30	36	42	48	54
62	6	12	18	24	31	37	43	49	55
64	6	12	19	25	32	38	44	51	57
66	6	13	19	26	33	39	46	52	59
68	6	13	20	27	34	40	47	54	61
70	7	14	21	28	35	42	49	56	63
72	7	14	21	28	36	43	50	57	64
74	7	14	22	29	37	44	51	59	66
76	7	15	22	30	38	45	53	60	68
78	7	15	23	31	39	46	54	62	70
80	8	16	24	32	40	48	56	64	72
82	8	16	24	32	41	49	57	65	73
84	8	16	25	33	42	50	58	67	75
86	8	17	25	34	43	51	60	68	77
88	8	17	26	35	44	52	61	70	79
90	9	18	27	36	45	54	63	72	81
92	9	18	27	36	46	55	64	73	82
94	9	18	28	37	47	56	65	75	84
96	9	19	28	38	48	57	67	76	86
98	9	19	29	39	49	58	68	78	88
100	10	20	30	40	50	60	70	80	90

Diff.	10	20	30	40	50	60	70	80	90	Diff.	10	20	30	40	50
100	10	20	30	40	50	60	70	80	90	200	20	40	60	80	100
102	10	20	30	40	51	61	71	81	91	202	20	40	60	80	101
104	10	20	31	41	52	62	72	83	93	204	20	40	61	81	102
106	10	21	31	42	53	63	74	84	95	206	20	41	61	82	103
108	10	21	32	43	54	64	75	86	97	208	20	41	62	83	104
110	11	22	33	44	55	66	77	88	99	210	21	42	63	84	105
112	11	22	33	44	56	67	78	89	100	212	21	42	63	84	106
114	11	22	34	45	57	68	79	91	102	214	21	42	64	85	107
116	11	23	34	46	58	69	81	92	104	216	21	43	64	86	108
118	11	23	35	47	59	70	82	94	106	218	21	43	65	87	109
120	12	24	36	48	60	72	84	96	108	220	22	44	66	88	110
122	12	24	36	48	61	73	85	97	109	222	22	44	66	88	111
124	12	24	37	49	62	74	86	99	111	224	22	44	67	89	112
126	12	25	37	50	63	75	88	100	113	226	22	45	67	90	113
128	12	25	38	51	64	76	89	102	115	228	22	45	68	91	114
130	13	26	39	52	65	78	91	104	117	230	23	46	69	92	115
132	13	26	39	52	66	79	92	105	118	232	23	46	69	92	116
134	13	26	40	53	67	80	93	107	120	234	23	46	70	93	117
136	13	27	40	54	68	81	95	108	122	236	23	47	70	94	118
138	13	27	41	55	69	82	96	110	124	238	23	47	71	95	119
140	14	28	42	56	70	84	98	112	126	240	24	48	72	96	120
142	14	28	42	56	71	85	99	113	127	242	24	48	72	96	121
144	14	28	43	57	72	86	100	115	129	244	24	48	73	97	122
146	14	29	43	58	73	87	102	116	131	246	24	49	73	98	123
148	14	29	44	59	74	88	103	118	133	248	24	49	74	99	124
150	15	30	45	60	75	90	105	120	135	250	25	50	75	100	125
152	15	30	45	60	76	91	106	121	136	252	25	50	75	100	126
154	15	30	46	61	77	92	107	123	138	254	25	50	76	101	127
156	15	31	46	62	78	93	109	124	140	256	25	51	76	102	128
158	15	31	47	63	79	94	110	126	142	258	25	51	77	103	129
160	16	32	48	64	80	96	112	128	144	260	26	52	78	104	130
162	16	32	48	64	81	97	113	129	145	262	26	52	78	104	131
164	16	32	49	66	82	98	114	131	147	264	26	52	79	105	132
166	16	33	49	66	83	99	116	132	149	266	26	53	79	106	133
168	16	33	50	67	84	100	117	134	151	268	26	53	80	107	134
170	17	34	51	68	85	102	119	136	153	270	27	54	81	108	135
172	17	34	51	68	86	103	120	137	154	272	27	54	81	108	136
174	17	34	52	69	87	104	121	139	156	274	27	54	82	109	137
176	17	35	52	70	88	105	123	140	158	276	27	55	82	110	138
178	17	35	53	71	89	106	124	142	160	278	27	55	83	111	139
180	18	36	54	72	90	108	126	144	162	280	28	56	84	112	140
182	18	36	54	72	91	109	127	145	163	282	28	56	84	112	141
184	18	36	55	73	92	110	128	147	165	284	28	56	85	113	142
186	18	37	55	74	93	111	130	148	167	286	28	57	85	114	143
188	18	37	56	75	94	112	131	150	169	288	28	57	86	115	144
190	19	38	57	76	95	114	133	152	171	290	29	58	87	116	145
192	19	38	57	76	96	115	134	153	172	292	29	58	87	116	146
194	19	38	58	77	97	116	135	155	174	294	29	58	88	117	147
196	19	39	59	78	98	117	136	156	176	296	29	59	88	118	148
198	19	39	59	79	99	118	138	158	178	298	29	59	89	119	149

Diff.	60	70	80	90	Diff.	10	20	30	40	50	60	70	80	90
200	120	140	160	180	300	30	60	90	120	150	180	210	240	270
202	121	141	161	181	302	30	60	90	120	151	181	211	241	271
204	122	142	163	183	304	30	60	91	121	152	182	212	243	273
206	123	144	164	185	306	30	61	91	122	153	183	214	244	275
208	124	145	166	187	308	30	61	92	123	154	184	215	246	277
210	126	147	168	189	310	31	62	93	124	155	186	217	248	279
212	127	148	169	190	312	31	62	93	124	156	187	218	249	280
214	128	149	171	192	314	31	62	94	125	157	188	219	251	282
216	129	151	172	194	316	31	63	94	126	158	189	221	252	284
218	130	152	174	196	318	31	63	95	127	159	190	222	254	286
220	132	154	176	198	320	32	64	96	128	160	192	224	256	288
222	133	155	177	199	322	32	64	96	128	161	193	225	257	289
224	134	156	179	201	324	32	64	97	129	162	194	226	259	291
226	135	158	180	203	326	32	65	97	130	163	195	228	260	293
228	136	159	182	205	328	32	65	98	131	164	196	229	262	295
230	138	161	184	207	330	33	66	99	132	165	198	231	264	297
232	139	162	185	208	332	33	66	99	132	166	199	232	265	298
234	140	163	187	210	334	33	66	100	133	167	200	233	267	300
236	141	165	188	212	336	33	67	100	134	168	201	235	268	302
238	142	166	190	214	338	33	67	101	135	169	202	236	270	304
240	144	168	192	216	340	34	68	102	136	170	204	238	272	306
242	145	169	193	217	342	34	68	102	136	171	205	239	273	307
244	146	170	195	219	344	34	68	103	137	172	206	240	275	309
246	147	172	196	221	346	34	69	103	138	173	207	242	276	311
248	148	173	198	223	348	34	69	104	139	174	208	243	278	313
250	150	175	200	225	350	35	70	105	140	175	210	245	280	315
252	151	176	201	226	352	35	70	105	140	176	211	246	281	316
254	152	177	203	228	354	35	70	106	141	177	212	247	283	318
256	153	179	204	230	356	35	71	106	142	178	213	249	284	320
258	154	180	206	232	358	35	71	107	143	179	214	250	286	322
260	156	182	208	234	360	36	72	108	144	180	216	252	288	324
262	157	183	209	235	362	36	72	108	144	181	217	253	289	325
264	158	184	211	237	364	36	72	109	145	182	218	254	291	327
266	159	186	212	239	366	36	73	109	146	183	219	256	292	329
268	160	187	214	241	368	36	73	100	147	184	220	257	294	331
270	162	189	216	243	370	37	74	111	148	185	222	259	296	333
272	163	190	217	244	372	37	74	111	148	186	223	260	297	334
274	164	191	219	246	374	37	74	112	149	187	224	261	299	336
276	165	193	220	248	376	37	75	112	150	188	225	263	300	338
278	166	194	222	250	378	37	75	113	151	189	226	264	302	340
280	168	196	224	252	380	38	76	114	152	190	228	266	304	342
282	169	197	225	253	382	38	76	114	152	191	229	267	305	343
284	170	198	227	255	384	38	76	115	153	192	230	268	307	345
286	171	200	228	257	386	38	77	115	154	193	231	270	308	347
288	172	201	230	259	388	38	77	116	155	194	232	271	310	349
290	174	203	232	261	390	39	78	117	156	195	233	273	312	351
292	175	204	233	262	392	39	78	117	156	196	234	274	313	352
294	176	205	235	264	394	39	78	118	157	197	236	275	315	354
296	177	207	236	266	396	39	79	118	158	198	237	277	316	356
298	178	208	238	268	398	39	79	111	159	199	238	278	318	358

Diff.	10	02	30	40	50	60	70	80	90
400	40	80	120	160	200	240	280	320	360
402	40	80	120	160	201	241	281	321	361
404	40	80	121	161	202	242	282	323	363
406	40	81	122	162	203	243	284	324	365
408	40	81	122	163	204	244	285	326	367
410	41	82	123	164	205	246	287	328	369
412	41	82	123	164	206	247	288	329	370
414	41	82	124	165	207	248	289	331	372
416	41	83	124	166	208	249	291	332	374
418	41	83	125	167	209	250	292	334	376
420	42	84	126	168	210	252	294	336	378
422	42	84	126	168	211	253	295	337	379
424	42	84	127	169	212	254	296	339	381
426	42	85	127	170	213	255	298	340	383
428	42	85	128	171	214	256	299	342	385
430	43	86	129	172	215	258	301	344	387
332	43	86	129	172	216	259	302	345	388
434	43	86	130	173	217	260	304	347	390

II.

Dip of Horizon.

Height Feet	Dip. M. S.	Height Feet	Dip. M. S.
0	0. 0	30	5.47
1	1. 4	35	6.17
2	1.30	40	6.43
3	1.50	45	7. 8
4	2. 7	50	7.30
5	2.23	55	7.53
6	2.36	60	8.14
7	2.49	65	8.34
8	3. 0	70	8.53
9	3.11	75	9.12
10	3.22	80	9.30
11	3.31	85	9.47
12	3.40	90	10. 4
13	3.50	95	10.21
14	3.58	100	10.37
15	4. 7	110	11. 8
16	4.14	120	11.38
17	4.23	130	12. 6
18	4.30	140	12.34
19	4.38	150	13. 0
20	4.45	160	13.26
22	4.58	170	13.50
24	5.12	180	14.15
26	5.25	190	14.38
28	5.37	200	15. 1

III.

Sun's Semidiameter.

	M. S.		M. S.
Jan.	1.16.19	July	1.15.47
Feb.	1.16.17	Aug.	1.15.49
Mar.	1.16.11	Sep.	1.15.55
Apr.	1.16. 2	Oct.	1.16. 3
May	1.15.54	Nov.	1.16.11
June	1.15.49	Dec.	1.16.17

IV.

Sun's Par. in Alt.

Altitude. D.	Parallax. S.	Altitude. D.	Parallax. S.
0	9	50	5
10	8	60	4
20	8	70	3
30	7	80	1
40	6	90	0

V.

Equatorial Degrees and Time.

D. is for Degrees, M. Minutes. S. Seconds, in Degrees of the Equator and in Time.

D. M.	H.M. M. S.	D. M.	HM. M.S.	D. M.	H.M. M. S.	D. M	H.M. M.S.
1	0. 4	16	1. 4	31	2. 4	46	3. 4
2	0. 8	17	1. 8	32	2. 8	47	3. 8
3	0.12	18	1.12	33	2.12	48	3.12
4	0.16	19	1.16	34	2.16	49	3.16
5	0.20	20	1.20	35	2.20	50	3.20
6	0.24	21	1.24	36	2.24	51	3.24
7	0.28	22	1.28	37	2.28	52	3.28
8	0.32	23	1.32	38	2.32	53	3.32
9	0.36	24	1.36	39	2.36	54	3.36
10	0.40	25	1.40	40	2.40	55	3.40
11	0.44	26	1.44	41	2.44	56	3.44
12	0.48	27	1.48	42	2.48	57	3.48
13	0.52	28	1.52	43	2.52	58	3.52
14	0.56	29	1.56	44	2.56	59	3.56
15	1. 0	30	2. 0	45	3. 0	60	4. 0

Deg.	H. M.	Deg.	H. M.
1	0. 4	180	12. 0
10	0.40	190	12.40
20	1.20	200	13.20
30	2. 0	210	14. 0
40	2.40	220	14.40
50	3.20	230	15.20
60	4. 0	240	16. 0
70	4.40	250	16.40
80	5.20	260	17.20
90	6. 0	270	18. 0
100	6.40	280	18.40
110	7.20	290	19.20
120	8. 0	300	20. 0
130	8.40	310	20.40
140	9.20	320	21.20
150	10.00	330	22. 0
160	10.40	340	22.40
170	11.20	350	23.20

This changes Degrees into Time, and the contrary for the whole Equator or Equinoctial.

VI. Increaſe of Moon's *Semidiameter for Altitude.

Deg.	10 D.	20 D.	30 D.	40 D.	50 D.	60 D.	70 D.	80 D.	90 D.
*Small	2 S.	5 S.	7 S.	9 S.	11 S.	12 S.	13 S.	14 S.	14 S.
*Mean	3	5	8	10	12	14	15	16	16
*Great	3	6	9	12	14	16	18	18	19

VII. A Table of Refraction, for the Latitudes of LONDON and the BRITISH CHANNEL.

Alt.	Refrac.	Alt.	Refrac.	Alt.	Refrac.	Alt.	Refrac.	Alt.	Refr.	Alt.	Ref.	Al.	Re.
M.	M. S.	D.M.	M. S.	D. M.	M. S.	D. M.	M. S.	D. M.	M. S.	D.	M. S.	D.	S.
0	34.30	1.30	21.17	3. 0	14.37	4.30	10.48	8.30	6. 8	16	3.17	46	55
2	34. 3	1.32	21. 6	3. 2	14.30	4.35	10.38	8.40	6. 1	16½	3.10	47	53
4	33.39	1.34	20.55	3. 4	14.24	4.40	10.29	8.50	5.55	17	3. 4	48	51
6	33.15	1.36	20.43	3. 6	14.17	4.45	10.19	9. 0	5.48	17½	2.59	49	49
8	32.51	1.38	20.31	3. 8	14.11	4.50	10.10	9.10	5.42	18	2.54	50	48
10	32.29	1.40	20.20	3.10	14. 4	4.55	10. 2	9.20	5.36	18½	2.49	51	46
12	32. 6	1.42	20. 9	3.12	13.58	5. 0	9 54	9.30	5.31	19	2.44	52	44
14	31.44	1.44	19.58	3.14	13.52	5. 5	9.46	9.40	5.25	19½	2.39	53	43
16	31.22	1.46	19.48	3.16	13.46	5.10	9.38	9.50	5.20	20	2.35	54	41
18	31. 0	1.48	19.37	3.18	13.40	5.15	9.30	10. 0	5.15	20½	2.31	55	40
20	30.39	1.50	19.27	3.20	13.34	5.20	9.23	10.10	5.10	21	2.27	56	38
22	30.18	1.52	19.17	3.22	13.28	5.25	9.15	10.20	5. 5	21½	2.24	57	37
24	29.57	1.54	19. 7	3.24	13.22	5.30	9. 8	10.30	5. 0	22	2.20	58	35
26	29.37	1.56	18.56	3.26	13.16	5.35	9. 1	10.40	4.55	22½	2.17	59	34
28	29.17	1.58	18.46	3.28	13.11	5.40	8.54	10.50	4.51	23	2.14	60	33
30	28.57	2. 0	18.36	3.30	13. 6	5.45	8.47	11. 0	4.47	23½	2.10	61	32
32	28.37	2. 2	18.26	3.32	13. 0	5.50	8.41	11.10	4.42	24	2. 7	62	30
34	28.18	2. 4	18.17	3.34	12.55	5.55	8.34	11.20	4.38	24½	2. 4	63	29
36	27.59	2. 6	18. 7	3.36	12.50	6. 0	8.28	11.30	4.34	25	2. 2	64	28
38	27.40	2. 8	17.58	3.38	12.45	6. 5	8.21	11.40	4.30	25½	1.59	65	26
40	27.22	2.10	17.49	3.40	12.40	6.10	8.15	11.50	4.26	26	1.56	66	25
42	27. 4	2.12	17.40	3.42	12.35	6.15	8. 9	12. 0	4.23	26½	1.53	67	24
44	26.46	2.14	17.31	3.44	12.30	6.20	8. 3	12.10	4.19	27	1.51	68	23
46	26.28	2.16	17.23	3.46	12.25	6.25	7.57	12.20	4.16	27½	1.49	69	22
48	26.10	2.18	17.14	3.48	12.20	6.30	7.51	12.30	4.12	28	1.47	70	21
50	25.54	2.20	17. 5	3.50	12.15	6.35	7.45	12.40	4. 9	28½	1.44	71	19
52	25.36	2.22	16.57	3.52	12.10	6.40	7.40	12.50	4. 6	29	1.42	72	18
54	25.18	2.24	16.49	3.54	12. 5	6.45	7.35	13. 0	4. 3	29½	1.40	73	17
56	25. 2	2.26	16.41	3.56	12. 0	6.50	7.30	13.10	4. 0	30	1.38	74	16
58	24.46	2.28	16.33	3.58	11.55	6.55	7.25	13.20	3.57	31	1.35	75	15
60	24.32	2.30	16.25	4. 0	11.51	7. 0	7.20	13.30	3.54	32	1.31	76	14
62	24.17	2.32	16.17	4. 2	11.47	7. 5	7.15	13.40	3.51	33	1.28	77	13
64	24. 3	2.34	16. 9	4. 4	11.43	7.10	7.11	13.50	3.48	34	1.24	78	12
66	23.49	2.36	16. 1	4. 6	11.38	7.15	7. 6	14. 0	3.45	35	1.21	79	11
68	23.35	2.38	15.53	4. 8	11.33	7.20	7. 2	14.10	3.42	36	1.18	80	10
70	23.22	2.40	15.45	4.10	11.29	7.25	6.57	14.20	3.40	37	1.16	81	9
72	23. 8	2.42	15.38	4.12	11.25	7.30	6.53	14.30	3.37	38	1.13	82	8
74	22.55	2.44	15.31	4.14	11.21	7.35	6.49	14.40	3.35	39	1.10	83	7
76	22.42	2.46	15.24	4.16	11.16	7.40	6.45	14.50	3.32	40	1. 8	84	6
78	22.29	2.48	15.17	4.18	11.12	7.45	6.41	15. 0	3.30	41	1. 5	85	5
80	22.17	2.50	15.10	4.20	11. 8	7.50	6.37	15.10	3.28	42	1. 3	86	4
82	22. 4	2.52	15. 3	4.22	11. 5	7.55	6.33	15.20	3.26	43	1. 1	87	3
84	21.52	2.54	14.56	4.24	11. 2	8. 0	6.29	15.30	3.24	44	0.59	88	2
86	21.40	2.56	14.49	4.26	10.58	8.10	6.22	15.40	3.21	45	0.57	89	1
88	21.28	2.58	14.53	4.28	10.55	8.20	6.15	15.50	3.19				

VIII. A Table of Courſes, Differences of Latitude and Departure.

When the Diſtance amounts to Thouſands of Miles; a ſmall Deviation from the ſtrict Reſult of Plane Triangles is here introduced, as a Reduction to the true Figure of the Earth.

	1°		2°		3°		4°		5°	
Dist.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.
1.00	1.00	0.02	0.99	0.03	0.99	0.05	0.99	0.07	0.99	0.09
2.00	2.00	0.04	1.99	0.07	1.99	0.10	1.99	0.14	1.99	0.17
3.00	3.00	0.05	2.99	0.10	2.99	0.16	2.99	0.21	2.99	0.26
4.00	4.00	0.07	3.99	0.14	3.99	0.21	3.99	0.28	3.98	0.35
5.00	5.00	0.09	4.99	0.17	4.99	0.26	4.99	0.35	4.98	0.44
6.00	6.00	0.10	5.99	0.21	5.99	0.31	5.98	0.42	5.98	0.52
7.00	7.00	0.12	6.99	0.24	6.99	0.37	6.98	0.49	6.97	0.61
8.00	8.00	0.14	7.99	0.28	7.99	0.42	7.98	0.56	7.97	0.70
9.00	9.00	0.16	8.99	0.31	8.99	0.47	8.98	0.63	8.97	0.79
10.00	10.00	0.18	9.99	0.35	9.99	0.52	9.97	0.70	9.96	0.87
11.00	11.00	0.19	10.99	0.38	10.98	0.58	10.97	0.77	10.96	0.96
12.00	12.00	0.21	11.99	0.42	11.98	0.63	11.97	0.84	11.96	1.05
13.00	13.00	0.23	12.99	0.45	12.98	0.68	12.97	0.91	12.95	1.14
14.00	14.00	0.24	13.99	0.49	13.98	0.73	13.96	0.98	13.95	1.22
15.00	15.00	0.26	14.99	0.52	14.98	0.79	14.96	1.05	14.95	1.31
16.00	16.00	0.28	15.99	0.56	15.98	0.84	15.96	1.12	15.94	1.40
17.00	17.00	0.30	16.99	0.59	16.98	0.89	16.96	1.19	16.94	1.49
18.00	18.00	0.31	17.99	0.63	17.97	0.94	17.95	1.26	17.93	1.57
19.00	19.00	0.33	18.99	0.66	18.97	1.00	18.95	1.33	18.93	1.66
20.00	20.00	0.35	19.98	0.70	19.97	1.05	19.95	1.40	19.92	1.75
21.00	21.00	0.37	20.98	0.73	20.97	1.10	20.95	1.47	20.92	1.84
22.00	22.00	0.38	21.98	0.77	21.97	1.15	21.95	1.54	21.92	1.92
23.00	23.00	0.40	22.98	0.80	22.97	1.20	22.94	1.61	22.91	2.01
24.00	24.00	0.42	23.98	0.84	23.96	1.26	23.94	1.68	23.91	2.10
25.00	25.00	0.44	24.98	0.87	24.96	1.31	24.94	1.75	24.91	2.19
26.00	26.00	0.45	25.98	0.91	25.96	1.36	25.94	1.82	25.90	2.27
27.00	27.00	0.47	26.98	0.94	26.96	1.41	26.93	1.89	26.90	2.36
28.00	28.00	0.49	27.98	0.98	27.96	1.47	27.93	1.96	27.90	2.45
29.00	29.00	0.51	28.98	1.01	28.96	1.52	28.93	2.03	28.89	2.54
30.00	30.00	0.52	29.98	1.05	29.96	1.57	29.93	2.10	29.89	2.62
31.00	31.00	0.54	30.98	1.08	30.96	1.62	30.92	2.17	30.89	2.71
32.00	32.00	0.56	31.98	1.12	31.95	1.68	31.92	2.24	31.88	2.80
33.00	33.00	0.58	32.98	1.15	32.95	1.73	32.92	2.31	32.88	2.89
34.00	34.00	0.59	33.98	1.19	33.95	1.78	33.92	2.38	33.88	2.97
35.00	35.00	0.61	34.98	1.22	34.95	1.83	34.91	2.45	34.87	3.06
36.00	36.00	0.63	35.97	1.26	35.95	1.89	35.91	2.52	35.87	3.15
37.00	37.00	0.65	36.97	1.29	36.95	1.94	36.91	2.59	36.86	3.24
38.00	38.00	0.66	37.97	1.33	37.95	2.00	37.91	2.66	37.86	3.32
39.00	39.00	0.68	38.97	1.36	38.95	2.04	38.90	2.73	38.86	3.41
40.00	40.00	0.70	39.97	1.40	39.94	2.09	39.90	2.80	39.85	3.50
41.00	41.00	0.72	40.97	1.43	40.94	2.15	40.90	2.87	40.85	3.58
42.00	42.00	0.73	41.97	1.47	41.94	2.20	41.90	2.94	41.85	3.67
43.00	43.00	0.75	42.97	1.50	42.94	2.25	42.89	3.01	42.84	3.76
44.00	44.00	0.77	43.97	1.54	43.94	2.30	43.89	3.08	43.84	3.85
45.00	45.00	0.78	44.97	1.57	44.94	2.36	44.89	3.15	44.84	3.93
46.00	46.00	0.80	45.97	1.61	45.93	2.41	45.89	3.22	45.83	4.02
47.00	47.00	0.82	46.97	1.64	46.93	2.46	46.88	3.29	46.83	4.11
48.00	48.00	0.84	47.97	1.68	47.93	2.51	47.88	3.36	47.82	4.20
49.00	49.00	0.86	48.97	1.71	48.93	2.57	48.88	3.43	48.82	4.29
50.00	50.00	0.87	49.97	1.75	49.93	2.62	49.88	3.50	49.81	4.37
Dist.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.
	89°		88°		87°		86°		85°	

	1°		2°		3°		4°		5°	
Dist.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.
51.00	51.00	0.89	50.96	1.78	50.93	2.67	50.87	3.57	50.81	4.45
52.00	52.00	0.91	51.96	1.82	51.93	2.72	51.87	3.64	51.81	4.54
53.00	53.00	0.93	52.96	1.85	52.93	2.78	52.87	3.71	52.80	4.62
54.00	54.00	0.94	53.96	1.89	53.92	2.84	53.87	3.78	53.80	4.71
55.00	55.00	0.96	54 96	1.92	54.92	2.89	54.86	3.85	54.79	4.80
56.00	56.00	0.98	55.96	1.96	55.92	2.94	55.86	3.92	55.79	4.89
57.00	57.00	0.99	56.96	1.99	56.92	2.99	56.86	3.99	56.79	4.98
58.00	58.00	1.01	57.96	2.02	57 92	3.05	57.86	4.06	57.78	5.07
59.00	59.00	1.03	58.96	2.06	58 92	3.10	58.85	4.13	58.78	5.16
60.00	60.00	1.05	59.96	2.10	59.92	3.15	59.85	4.20	59.77	5.24
61.00	61.00	1.06	60.96	2.13	60.91	3.20	60.85	4.27	60.77	5.33
62.00	62.00	1.08	61.96	2.17	61.91	3.26	61.85	4.34	61.76	5.41
63.00	63.00	1.10	62.96	2.20	62.91	3.31	62.84	4.41	62.76	5.50
64.00	64.00	1.12	63.96	2.24	63.91	3.36	63.84	4.48	63.76	5.59
65.00	65.00	1.13	64.96	2.27	64.91	3.41	64.84	4.55	64.75	5.68
66.00	66.00	1.15	65.96	2.31	65.91	3.47	65.84	4.62	65.75	5.76
67.00	67.00	1.17	66.96	2.34	66.91	3.52	66.83	4.68	66.74	5.85
68.00	68.00	1.19	67.95	2.38	67.90	3.57	67.83	4.75	67.74	5.94
69.00	69.00	1.20	68.95	2.41	68.90	3.62	68.83	4.82	68.74	6.03
70.00	70.00	1.22	69.95	2.45	69.90	3.67	69.83	4.89	69.73	6.11
71.00	71.00	1.24	70.95	2.48	70.90	3.73	70.82	4.96	70.73	6.20
72.00	72.00	1.26	71.95	2.52	71.90	3.78	71.82	5.03	71.73	6.29
73.00	73.00	1.27	72.95	2.55	72.90	3.83	72.82	5.10	72.72	6.37
74.00	74.00	1.29	73.95	2.59	73.90	3.88	73.82	5.17	73.72	6.46
75.00	75.00	1.31	74.95	2.62	74.89	3.93	74.82	5.24	74.72	6.55
76.00	76.00	1.33	75.95	2.66	75.89	3.99	75.81	5.31	75.71	6.63
77.00	77.00	1.34	76.95	2.69	76.89	4.04	76.81	5.38	76.71	6.72
78.00	78.00	1.36	77.95	2.73	77.89	4.09	77.81	5.45	77.71	6.81
79.00	79.00	1.38	78.95	2.76	78.89	4.15	78.81	5.52	78.70	6.90
80.00	80.00	1.40	79.95	2.80	79.89	4.20	79.80	5.59	79.70	6.98
81.00	81.00	1.41	80.95	2.83	80.89	4.25	80.80	5.66	80.70	7.07
82.00	82.00	1.43	81.94	2.87	81.88	4.30	81.80	5.73	81.69	7.16
83.00	83.00	1.45	82.94	2.90	82.88	4.35	82.80	5.80	82.69	7.25
84.00	84 00	1.47	83.94	2.94	83.88	4.41	83.79	5.87	83.68	7.33
85.00	85.00	1.48	84.94	2.97	84.88	4.46	84 79	5.94	84.68	7.42
86.00	86.00	1.50	85.94	3.01	85.88	4.51	85.79	6.02	85.68	7.51
87.00	87.00	1.52	86.94	3.04	86.88	4.56	86.79	6.08	86.67	7.59
88.00	88.00	1.54	87.94	3.08	87.88	4.62	87.78	6.15	87 67	7.68
89.00	89.00	1.55	88.94	3.11	88.87	4.67	88.78	6.22	88.67	7.77
90.00	90.00	1.57	89.94	3.15	89.87	4.72	89.78	6.29	89.66	7.85
91.00	91.00	1.59	90.94	3.18	90.87	4.77	90.78	6.36	90.66	7.94
92.00	92.00	1.60	91.94	3.22	91.87	4.83	91.77	6.43	91.65	8.03
93.00	93.00	1.62	92.94	3.25	92.87	4.88	92.77	6.50	92.65	8.12
94.00	94.00	1.64	93.94	3.29	93.87	4.93	93.77	6.57	93.65	8.20
95.00	95.00	1.65	94.94	3.32	94.87	4.98	94.77	6.64	94.64	8.2
96.00	96.00	1.67	95.94	3.36	95.86	5.04	95.76	6.71	95.64	8.38
97.00	97.00	1.69	96.94	3.39	96.86	5.08	96.76	6.78	96.63	8.46
98.00	98.00	1.71	97.94	3.43	97.86	5.14	97.76	6.85	97.63	8.55
99.00	99.00	1.73	98.94	3.46	98.86	5.19	98.76	6.92	98.62	8.64
100.00	100.00	1.75	99.94	3.50	99 86	5.24	99.76	6.99	99.62	8.73
Dist.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.
	89°		88°		87°		86°		85°	

	6°		7°		8°		9°		10°	
Dist.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.
1.00	0.99	0.10	0.99	0.12	0.99	0.14	0.99	0.16	0.98	0.17
2.00	1.99	0.21	1.99	0.24	1.98	0.28	1.98	0.31	1.97	0.35
3.00	2.98	0.31	2.98	0.37	2.97	0.42	2.96	0.47	2.95	0.52
4.00	3.98	0.42	3.97	0.49	3.96	0.56	3.95	0.63	3.94	0.69
5.00	4.97	0.52	4.96	0.61	4.95	0.70	4.94	0.78	4.92	0.87
6.00	5.97	0.63	5.96	0.73	5.94	0.84	5.93	0.94	5.91	1.04
7.00	6.96	0.73	6.95	0.85	6.93	0.97	6.91	1.10	6.89	1.22
8.00	7.96	0.84	7.94	0.98	7.92	1.11	7.90	1.25	7.88	1.39
9.00	8.95	1.94	8.93	1.10	8.91	1.25	8.89	1.41	8.86	1.56
10.00	9.95	1.05	9.92	1.22	9.90	1.39	9.88	1.56	9.85	1.74
11.00	10.94	1.15	10.92	1.34	10.89	1.53	10.86	1.72	10.83	1.91
12.00	11.93	1.25	11.91	1.47	11.88	1.67	11.85	1.88	11.81	2.08
13.00	12.93	1.36	12.90	1.59	12.87	1.81	12.84	2.03	12.80	2.26
14.00	13.92	1.46	13.89	1.71	13.86	1.95	13.83	2.19	13.78	2.43
15.00	14.92	1.58	14.89	1.83	14.85	2.09	14.81	2.35	14.77	2.61
16.00	15.91	1.67	15.88	1.95	15.84	2.23	15.80	2.50	15.75	2.78
17.00	16.91	1.78	16.87	2.08	16.83	2.36	16.79	2.66	16.74	2.95
18.00	17.90	1.88	17.86	2.20	17.82	2.50	17.78	2.82	17.72	3.12
19.00	18.90	1.99	18.86	2.32	18.81	2.64	18.76	2.97	18.71	3.30
20.00	19.89	2.09	19.85	2.44	19.80	2.78	19.75	3.13	19.70	3.47
21.00	20.89	2.19	20.84	2.57	20.80	2.92	20.74	3.29	20.68	3.64
22.00	21.88	2.30	21.83	2.69	21.79	3.06	21.73	3.45	21.67	3.82
23.00	22.88	2.40	22.83	2.81	22.78	3.20	22.71	3.60	22.65	3.99
24.00	23.87	2.51	23.82	2.93	23.77	3.34	23.70	3.76	23.64	4.16
25.00	24.87	2.61	24.81	3.05	24.76	3.48	24.69	3.92	24.62	4.34
26.00	25.86	2.72	25.80	3.18	25.75	3.62	25.68	4.07	25.61	4.51
27.00	26.86	2.82	26.80	3.30	26.74	3.75	26.66	4.23	26.59	4.68
28.00	27.85	2.93	27.79	3.42	27.73	3.89	27.65	4.39	27.58	4.86
29.00	28.85	3.03	28.79	3.54	28.72	4.03	28.64	4.55	28.56	5.03
30.00	29.84	3.14	29.78	3.67	29.71	4.17	29.63	4.69	29.54	5.21
31.00	30.83	3.24	30.77	3.79	30.70	4.31	30.61	4.86	30.53	5.38
32.00	31.83	3.34	31.76	3.91	31.69	4.45	31.60	5.02	31.51	5.55
33.00	32.82	3.45	32.75	4.03	32.68	4.59	32.59	5.17	32.50	5.72
34.00	33.82	3.55	33.74	4.15	33.67	4.73	33.58	5.33	33.48	5.90
35.00	34.81	3.66	34.74	4.28	34.66	4.87	34.56	5.49	34.47	6.07
36.02	35.81	3.76	35.73	4.40	35.65	5.01	35.55	5.64	35.45	6.24
37.00	36.80	3.87	36.72	4.52	36.64	5.15	36.54	5.80	36.44	6.42
38.00	37.80	3.97	37.72	4.64	37.63	5.29	37.53	5.96	37.42	6.59
39.00	38.79	4.08	38.71	4.76	38.62	5.43	38.52	6.11	38.41	6.77
40.00	39.78	4.18	39.70	4.89	39.61	5.57	39.51	6.26	39.39	6.95
41.00	40.78	4.28	40.69	5.01	40.60	5.71	40.50	6.41	40.38	7.12
42.00	41.77	4.39	41.69	5.13	41.59	5.85	41.49	6.57	41.37	7.29
43.00	42.77	4.49	42.68	5.25	42.58	5.98	42.48	6.73	42.35	7.47
44.00	43.76	4.60	43.67	5.37	43.57	6.12	43.46	6.88	43.34	7.64
45.00	44.75	4.70	44.66	5.49	44.56	6.26	44.45	7.04	44.32	7.82
46.00	45.75	4.81	45.66	5.62	45.55	6.40	45.44	7.20	45.31	7.98
47.00	46.74	4.91	46.65	5.74	46.54	6.54	46.43	7.35	46.29	8.15
48.00	47.74	5.02	47.64	5.86	47.53	6.68	47.41	7.51	47.28	8.32
49.00	48.73	5.12	48.63	5.98	48.52	6.82	48.40	7.66	48.26	8.50
50.00	49.72	5.22	49.63	6.10	49.51	6.96	49.38	7.82	49.24	8.68
Dist.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.
	84°		83°		82°		81°		80°	

	6°		7°		8°		9°		10°	
Dist.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.
51.00	50.72	5.33	50.62	6.22	50.50	7.10	50.37	7.98	50.23	8.86
52.00	51.72	5.44	51.61	6.34	51.49	7.24	51.36	8.14	51.21	9.03
53.00	52.71	5.54	52.61	6.46	52.48	7.38	52.35	8.30	52.20	9.20
54.00	53.70	5.65	53.60	6.58	53.47	7.52	53.34	8.45	53.18	9.38
55.00	54.70	5.75	54.59	6.70	54.47	7.66	54.32	8.61	54.17	9.55
56.00	55.69	5.85	55.58	6.83	55.46	7.79	55.31	8.76	55.15	9.75
57.00	56.69	5.96	56.58	6.95	56.45	7.93	56.30	8.92	56.14	9.90
58.00	57.68	6.06	57.57	7.07	57.44	8.07	57.29	9.08	57.12	10.07
59.00	58.68	6.17	58.56	7.19	58.43	8.21	58.28	9.23	58.10	10.25
60.00	59.67	6.27	59.55	7.31	59.42	8.35	59.26	9.39	59.09	10.42
61.00	60.67	6.38	60.55	7.43	60.41	8.49	60.25	9.55	60.07	10.59
62.00	61.66	6.48	61.54	7.56	61.40	8.63	61.24	9.70	61.06	10.77
63.00	62.66	6.59	62.53	7.68	62.39	8.77	62.22	9.86	62.04	10.94
64.00	63.65	6.69	63.52	7.80	63.38	8.91	63.21	10.02	63.03	11.11
65.00	64.64	6.80	64.52	7.92	64.37	9.05	64.20	10.17	64.01	11.29
66.00	65.64	6.90	65.51	8.04	65.36	9.19	65.19	10.33	65.00	11.46
67.00	66.63	7.01	66.50	8.17	60.35	9.32	66.18	10.49	65.98	11.64
68.00	67.63	7.11	67.49	8.29	67.34	9.46	67.16	10.65	66.97	11.81
69.00	68.62	7.21	68.49	8.41	68.33	9.60	68.15	10.80	67.95	11.98
70.00	69.62	7.32	69.48	8.53	69.32	9.74	69.14	10.95	68.94	12.16
71.00	70.61	7.42	70.47	8.65	70.31	9.88	70.13	11.11	69.92	12.33
72.00	71.61	7.53	71.46	8.77	71.30	10.02	71.11	11.26	70.91	12.50
73.00	72.60	7.63	72.46	8.90	72.29	10.16	72.10	11.42	71.89	12.68
74.00	73.59	7.74	73.45	9.02	73.28	10.30	73.09	11.58	72.88	12.85
75.00	74.59	7.84	74.44	9.14	74.27	10.44	74.08	11.73	73.86	13.02
76.00	75.58	7.94	75.44	9.26	75.26	10.58	75.07	11.89	74.85	13.20
77.00	76.58	8.05	76.43	9.38	76.25	10.72	76.05	12.05	75.83	13.37
78.00	77.57	8.15	77.42	9.51	77.24	10.86	77.04	12.20	76.82	13.54
79.00	78.57	8.26	78.41	9.63	78.23	10.99	78.03	12.36	77.80	13.72
80.00	79.56	8.36	79.40	9.75	79.22	11.13	79.02	12.51	78.79	13.89
81.00	80.56	8.47	80.39	9.87	80.21	11.27	80.00	12.67	79.77	14.07
82.00	81.55	8.57	81.39	9.99	81.20	11.41	80.99	12.83	80.76	14.24
83.00	82.55	8.68	82.38	10.12	82.19	11.55	81.98	12.98	81.74	14.41
84.00	83.54	8.78	83.38	10.24	83.18	11.69	82.97	13.14	82.72	14.59
85.00	84.53	8.88	84.37	10.36	84.17	11.83	83.95	13.30	83.73	14.76
86.00	85.53	8.99	85.36	10.48	85.16	11.97	84.94	13.45	84.71	14.93
87.00	86.52	9.09	86.35	10.60	86.15	12.11	85.93	13.61	85.69	15.11
88.00	87.52	9.20	87.34	10.73	87.14	12.25	86.92	13.76	86.68	15.28
89.00	88.51	9.30	88.34	10.85	88.13	12.39	87.91	13.92	87.67	15.46
90.00	89.51	9.41	89.33	10.97	89.12	12.53	88.89	14.08	88.65	15.62
91.00	90.50	9.51	90.32	11.09	90.11	12.67	89.88	14.24	89.62	15.80
92.00	91.50	9.62	91.31	11.21	91.10	12.80	90.87	14.40	90.60	15.98
93.00	92.49	9.72	92.31	11.33	92.10	12.94	91.86	14.55	91.59	16.15
94.00	93.49	9.83	93.30	11.46	93.09	13.08	92.84	14.71	92.57	16.32
95.00	94.48	9.93	94.29	11.58	94.08	13.22	93.83	14.86	93.56	16.50
96.00	95.47	10.04	95.29	11.70	95.07	13.36	94.82	15.02	94.54	16.67
97.00	96.47	10.14	96.28	11.82	96.06	13.50	95.81	15.18	95.53	16.85
98.00	97.46	10.24	97.27	11.94	97.05	13.64	96.79	15.34	96.51	17.02
99.00	98.46	10.35	98.26	12.07	98.04	13.78	97.78	15.49	97.50	17.19
100.00	99.45	10.45	99.26	12.19	99.03	13.92	98.77	15.64	98.48	17.37
Dist.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.
	84°		83°		82°		81°		80°	

	11°		12°		13°		14°		15°	
Dist.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.
1.00	0.98	0.19	0.98	0.21	0.97	0.23	0.97	0.24	0.97	0.20
2.00	1.96	0.38	1.96	0.42	1.95	0.45	1.94	0.48	1.93	0.52
3.00	2.94	0.57	2.93	0.62	2.92	0.68	2.91	0.73	2.90	0.78
4.00	3.93	0.76	3.91	0.83	3.90	0.90	3.88	0.97	3.86	1.04
5.00	4.91	0.95	4.89	1.04	4.87	1.13	4.85	1.21	4.83	1.29
6.00	5.89	1.15	5.87	1.25	5.85	1.35	5.82	1.45	5.80	1.55
7.00	6.87	1.34	6.85	1.46	6.82	1.58	6.79	1.69	6.76	1.81
8.00	7.85	1.53	7.83	1.66	7.80	1.80	7.76	1.93	7.73	2.07
9.00	8.84	1.72	8.80	1.87	8.77	2.03	8.73	2.18	8.69	2.33
10.00	9.82	1.91	9.78	2.08	9.74	2.25	9.70	2.42	9.66	2.59
11.00	10.80	2.10	10.76	2.29	10.72	2.47	10.67	2.66	10.63	2.85
12.00	11.78	2.29	11.74	2.50	11.69	2.70	11.64	2.90	11.60	3.11
13.00	12.76	2.48	12.72	2.70	12.67	2.92	12.61	3.15	12.57	3.37
14.00	13.74	2.67	13.70	2.91	13.64	3.15	13.58	3.39	13.53	3.63
15.00	14.73	2.86	14.67	3.12	14.62	3.37	14.55	3.63	14.50	3.88
16.00	15.71	3.05	15.65	3.33	15.59	3.60	15.52	3.87	15.46	4.14
17.00	16.69	3.24	16.63	3.53	16.57	3.82	16.49	4.11	16.43	4.40
18.00	17.67	3.43	17.61	3.74	17.54	4.05	17.46	4.36	17.40	4.66
19.00	18.65	3.63	18.59	3.95	18.51	4.27	18.44	4.60	18.36	4.92
20.00	19.63	3.82	19.56	4.16	19.49	4.50	19.41	4.84	19.32	5.18
21.00	20.61	4.01	20.54	4.37	20.46	4.72	20.38	5.08	20.28	5.44
22.00	21.60	4.20	21.52	4.57	21.44	4.95	21.35	5.32	21.24	5.70
23.00	22.58	4.39	22.50	4.78	22.41	5.17	22.32	5.56	22.22	5.96
24.00	23.56	4.58	23.48	4.99	23.38	5.40	23.29	5.81	23.18	6.22
25.00	24.54	4.77	24.45	5.20	24.36	5.62	24.26	6.05	24.15	6.47
26.00	25.52	4.96	25.43	5.41	25.33	5.85	25.23	6.29	25.12	6.73
27.00	26.50	5.15	26.41	5.61	26.31	6.07	26.20	6.54	26.08	6.99
28.00	27.49	5.34	27.39	5.82	27.28	6.30	27.17	6.78	27.05	7.25
29.00	28.47	5.53	28.37	6.03	28.26	6.52	28.14	7.02	28.02	7.51
30.00	29.45	5.72	29.35	6.24	29.23	6.75	29.11	7.26	28.98	7.76
31.00	30.43	5.92	30.32	6.45	30.21	6.97	30.08	7.50	29.95	8.02
32.00	31.41	6.11	31.30	6.65	31.18	7.20	31.05	7.75	30.92	8.28
33.00	32.39	6.30	32.28	6.86	32.15	7.42	32.02	7.99	31.88	8.54
34.00	33.38	6.49	33.26	7.07	33.13	7.65	32.99	8.23	32.85	8.80
35.00	34.36	6.68	34.24	7.28	34.10	7.87	33.96	8.47	33.82	9.05
36.00	35.34	6.87	35.21	7.48	35.08	8.10	34.93	8.71	34.78	9.31
37.00	36.32	7.06	36.19	7.69	36.05	8.32	35.90	8.96	35.75	9.57
38.00	37.30	7.25	37.17	7.90	37.03	8.55	36.87	9.20	36.72	9.83
39.00	38.28	7.44	38.15	8.11	38.00	8.77	37.84	9.44	37.68	10.09
40.00	39.27	7.63	39.13	8.32	38.98	9.00	38.81	9.68	38.64	10.35
41.00	40.25	7.82	40.10	8.52	39.95	9.22	39.78	9.93	39.60	10.61
42.00	41.23	8.01	41.08	8.73	40.92	9.45	40.75	10.17	40.57	10.87
43.00	42.21	8.20	42.06	8.94	41.90	9.67	41.72	10.41	41.54	11.13
44.00	43.19	8.40	43.04	9.15	42.87	9.90	42.69	10.65	42.50	11.39
45.00	44.17	8.59	44.02	9.36	43.85	10.12	43.66	10.89	43.46	11.65
46.00	45.16	8.78	45.00	9.56	44.82	10.35	44.63	11.14	44.43	11.91
47.00	46.14	8.97	46.97	9.77	45.80	10.57	45.60	11.38	45.40	12.17
48.00	47.12	9.16	47.95	9.98	46.77	10.80	46.57	11.62	46.36	12.43
49.00	48.10	9.35	48.93	10.19	47.74	11.02	47.54	11.86	47.33	12.69
50.00	49.08	9.54	49.91	10.40	48.72	11.25	48.51	12.10	48.30	12.94
Dist.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.
	79°		78°		77°		76°		75°	

	11°		12°		13°		14°		15°	
Dist.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep	Lat.	Dep.	Lat.	Dep
51.00	50.06	9.74	49.89	10.60	49.69	11.47	49.49	12.34	49.26	13.20
52.00	51.04	9.93	50.87	10 81	50.66	11.70	50.46	12.58	50.23	13.46
53.00	52.03	10.12	51.85	11.02	51.64	11.92	51.43	12.83	51.19	13.72
54.00	53.01	10.31	52.83	11.23	52.61	12.15	52.40	13.07	52.16	13.98
55.00	54.00	10.50	53.80	11.44	53.58	12.37	53.37	13.31	53.13	14 24
56.00	54.98	10.69	54.78	11.64	54.56	12.60	54.34	13.55	54.09	14.50
57.00	55.96	10.88	55.76	11.85	55.53	12.82	55.31	13.79	55.06	14.76
58.00	56.94	11.07	56.73	12.06	56.50	13.05	56.28	14.04	56.03	15.02
59.00	57.92	11.26	57.71	12.26	57.48	13.27	57.25	14.28	56.99	15.28
60.00	58 90	11.45	58.69	12.47	58.46	13.50	58.22	14.52	57.96	15.54
61.00	59.88	11.65	59.67	12.67	59.43	13.72	59.19	14.76	58.93	15.80
62.00	60.86	11.84	60.65	12.88	60.40	13.95	60.16	15.00	59 89	16.06
63.00	61.84	12.03	61.63	13.09	61 37	14.17	61.13	15.24	60.84	16.31
64.00	62.82	12.22	62.60	13.30	62.35	14.40	62.10	15.48	61.81	16.57
65.00	63.80	12.41	63.58	13.51	63.32	14.62	63.07	15.73	62.78	16.83
66.00	64.79	12.60	64.56	13.71	64.30	14.85	64.04	15.97	63.74	17.09
67.00	65.77	12.79	65.53	13.92	65.28	15.07	65.01	16.21	64.71	17.35
68.00	66.75	12 98	66.51	14.13	66.25	15.30	65.98	16.45	65.68	17.61
69.00	67.73	13.17	67.49	4.34	67.23	15.52	66.95	16.69	66.64	17.87
70.00	68.71	13.36	68.47	14.55	68.20	15.75	67.92	16.93	67.61	18.12
71.00	69.70	13.55	69.45	14 76	69.17	15.97	68.89	17.17	68.57	18.38
72.00	70.68	13.74	70.43	14.97	70.15	16.20	69.86	17.41	69.54	18.64
73.00	71.66	13.93	71.40	15.18	71.12	16.42	70.83	17.65	70.51	18.89
74.00	72.64	14.12	72.38	15.39	72.10	16.65	71.80	17.89	71.47	19.15
75.00	73.62	14.31	73.36	15.60	73.07	16.87	72.77	18.14	72.44	19.41
76.00	74.60	14.50	74.34	15.81	74.05	17.10	73.74	18.38	73.40	19.67
77.00	75.59	14.69	75.31	16.01	75.02	17.32	74.71	18.62	74.38	19.93
78.00	76.57	14.88	76.29	16.22	76.00	17.55	75.68	18.86	75.34	20.19
79.00	77.55	15.07	77.26	16.43	76.97	17.77	76.65	19.10	76.30	20.45
80.00	78.53	15.26	78.25	16.63	77.95	18.00	77.62	19.35	77.27	20.71
81.00	79.52	15.46	79.23	16.84	78.92	18.22	78.60	19.59	78.23	20.97
82.00	80.50	15.65	80.20	17.05	79.90	18.45	79.57	19.84	79.20	21.23
83 00	81.48	15.84	81.18	17.25	80.87	18.67	80.54	20.08	80.16	21.47
84.00	82.46	16.03	82.16	17.46	81.85	18.90	81.51	20.32	81.13	21.75
85.00	83.44	16.22	83.14	17.67	82.82	19.12	82.48	20.56	82.10	22.00
86.00	84.42	16.41	84.12	17.88	83.80	19.35	83.45	20.80	83.06	22.26
87.00	85.40	16.60	85.10	18.09	84.77	19.57	84.42	21.05	84.03	22.52
88.06	86.39	16.78	86.08	18.30	85.75	19.80	85.39	21.29	85.00	22.78
89.00	87.37	16.98	87.06	18.50	86.72	20.02	86.36	21.53	85.96	23.04
90.10	88.35	17.17	88.03	18.71	87.99	20.25	87.33	21.77	86.93	23.29
91.00	89.33	17.37	89.01	18.92	88.67	20.47	88.30	22.01	87.90	23.55
92 00	90.32	17.56	89.99	19.13	89.65	20.70	89.27	22.25	88.86	23.81
93.00	91.30	17.75	90.97	19.33	90.62	20.92	90.24	22 49	89.83	24.07
94.00	92.28	17.94	91.95	19.54	91.60	21.15	91.21	22.74	90.80	24.33
95.00	93.26	18.13	92.93	19.75	92.57	21.37	92.18	22.98	91.76	24.59
96.00	94.24	18.32	93.90	19.96	93.55	21.60	93.15	23.23	92.73	24.85
97.00	95.22	18.51	94.88	20.17	94.52	21.82	94.12	23.46	93.70	25.11
98 00	96.20	18.70	95.86	20.37	95.50	22.05	95.09	23.70	94.66	25.37
99.00	97.18	18.89	96.84	20.58	96.47	22.27	96.06	23.94	95.63	25.63
100 00	98.16	19.08	97.81	20.79	97.44	22.50	97.03	24.19	96.59	25.88
Dist.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.
	79°		78°		77°		76°		75°	

	16°		17°		18°		19°		20°	
Dist.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.
1.00	0.96	0.28	0.96	0.29	0.95	0.31	0.95	0.33	0.94	0.34
2.00	1.92	0.55	1.91	0.58	1.90	0.62	1.89	0.65	1.88	0.68
3.00	2.88	0.83	2.87	0.88	2.85	0.93	2.84	0.98	2.82	1.03
4.00	3.85	1.10	3.83	1.17	3.80	1.24	3.78	1.30	3.76	1.37
5.00	4.81	1.38	4.78	1.46	4.76	1.55	4.73	1.63	4.70	1.71
6.00	5.77	1.65	5.74	1.75	5.71	1.85	5.67	1.95	5.64	2.05
7.00	6.73	1.93	6.69	2.05	6.66	2.16	6.62	2.28	6.58	2.40
8.00	7.69	2.20	7.65	2.34	7.61	2.47	7.56	2.60	7.52	2.74
9.00	8.65	2.48	8.61	2.63	8.56	2.78	8.51	2.93	8.46	3.08
10.00	9.61	2.76	9.56	2.92	9.51	3.09	9.46	3.26	9.40	3.42
11.00	10.57	3.04	10.52	3.21	10.46	3.40	10.40	3.58	10.34	3.76
12.00	11.53	3.31	11.48	3.51	11.41	3.71	11.35	3.91	11.28	4.10
13.00	12.49	3.59	12.43	3.80	12.36	4.02	12.30	4.23	12.22	4.45
14.00	13.46	3.86	13.39	4.09	13.31	4.33	13.24	4.56	13.16	4.79
15.00	14.42	4.14	14.34	4.38	14.26	4.64	14.18	4.88	14.10	5.13
16.00	15.38	4.41	15.30	4.67	15.22	4.94	15.13	5.21	15.04	5.47
17.00	16.34	4.69	16.26	4.97	16.17	5.25	16.07	5.53	15.98	5.82
18.00	17.30	4.96	17.21	5.26	17.12	5.56	17.02	5.86	16.92	6.16
19.00	18.26	5.24	18.17	5.55	18.07	5.87	17.96	6.19	17.86	6.50
20.00	19.23	5.51	19.12	5.85	19.02	6.18	18.91	6.51	18.79	6.84
21.00	20.18	5.79	20.08	6.14	19.97	6.49	19.86	6.84	19.73	7.18
22.00	21.14	6.06	21.04	6.43	20.92	6.80	20.80	7.17	20.67	7.52
23.00	22.10	6.34	21.99	6.72	21.87	7.11	21.75	7.49	21.61	7.87
24.00	23.07	6.61	22.95	7.02	22.82	7.42	22.69	7.82	22.55	8.21
25.00	24.03	6.89	23.91	7.31	23.77	7.73	23.64	8.15	23.49	8.55
26.00	24.99	7.17	24.86	7.60	24.72	8.03	24.58	8.47	24.43	8.89
27.00	25.95	7.44	25.82	7.89	25.68	8.34	25.53	8.80	25.37	9.24
28.00	26.91	7.72	26.78	8.18	26.63	8.65	26.47	9.13	26.31	9.58
29.00	27.87	7.99	27.73	8.48	27.58	8.96	27.42	9.45	27.25	9.92
30.00	28.84	8.27	28.69	8.77	28.53	9.27	28.37	9.77	28.19	10.26
31.00	29.80	8.54	29.64	9.06	29.48	9.58	29.31	10.10	29.13	10.60
32.00	30.76	8.82	30.60	9.35	30.43	9.89	30.26	10.42	30.07	10.94
33.00	31.72	9.09	31.56	9.65	31.38	10.20	31.20	10.75	31.01	11.28
34.00	32.68	9.37	32.51	9.94	32.33	10.51	32.15	11.08	31.95	11.62
35.00	33.64	9.64	33.47	10.23	33.28	10.82	33.09	11.40	32.89	11.97
36.00	34.60	9.92	34.42	10.52	34.24	11.12	34.04	11.73	33.83	12.31
37.00	35.56	10.19	35.38	10.82	35.19	11.44	34.98	12.06	34.77	12.65
38.00	36.52	10.47	36.34	11.11	36.14	11.74	35.93	12.38	35.71	13.00
39.00	37.48	10.75	37.29	11.40	37.09	12.05	36.87	12.70	36.65	13.34
40.00	38.45	11.03	38.25	11.69	38.04	12.36	37.82	13.02	37.59	13.68
41.00	39.41	11.30	39.21	11.99	38.99	12.67	38.87	13.35	38.53	14.03
42.00	40.37	11.58	40.16	12.28	39.94	12.98	39.72	13.67	39.47	14.37
43.00	41.33	11.85	41.12	12.57	40.89	13.29	40.66	14.00	40.41	14.71
44.00	42.29	12.13	42.08	12.86	41.84	13.60	41.61	14.33	41.35	15.05
45.00	43.25	12.40	43.03	13.15	42.80	13.91	42.56	14.65	42.29	15.40
46.00	44.22	12.68	43.99	13.45	43.75	14.21	43.50	14.98	43.23	15.74
47.00	45.17	12.95	44.94	13.74	44.70	14.52	44.45	15.30	44.17	16.08
48.00	46.13	13.23	45.90	14.03	45.65	14.83	45.39	15.63	45.11	16.42
49.00	47.09	13.50	46.86	14.32	46.60	15.14	46.34	15.95	46.05	16.76
50.00	48.06	13.78	47.81	14.62	47.55	15.45	47.28	16.28	46.98	16.10
Dist.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.
	74°		73°		72°		71°		70°	

	16°		17°		18°		19°		20°	
Dist.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.
51.00	49.02	14.05	48.77	14.91	48.50	15.76	48.23	16.60	47.92	17.45
52.00	49.98	14.33	49.73	15.20	49.45	16.07	49.17	16.93	48.86	17.79
53.00	50.94	14.60	50.68	15.50	50.40	16.38	50.12	17.26	49.80	18.13
54.00	51.90	14.88	51.64	15.79	51.35	16.69	51.06	17.58	50.74	18.47
55.00	52.87	15.16	52.59	16.08	52.31	17.00	52.01	17.91	51.68	18.82
56.00	53.83	15.43	53.55	16.37	53.26	17.30	52.95	18.23	52.62	19.16
57.00	54.79	15.71	54.51	16.67	54.21	17.61	53.89	18.56	53.56	19.50
58.00	55.75	15.98	55.46	16.96	55.16	17.92	54.84	18.88	54.50	19.84
59.00	56.71	16.26	56.42	17.25	56.11	18.23	55.78	19.21	55.44	20.18
50.00	57.67	16.54	57.38	17.54	57.06	18.54	56.73	19.53	56.38	20.52
61.00	58.63	16.81	58.33	17.84	58.01	18.85	57.67	19.86	57.32	20.87
62.00	59.59	17.08	59.29	18.13	58.97	19.16	58.62	20.19	58.26	21.21
63.00	60.55	17.36	60.24	18.42	59.92	19.47	59.56	20.51	59.20	21.55
64.00	61.51	17.63	61.20	18.71	60.87	19.78	60.51	20.84	60.14	21.89
65.00	62.48	17.91	62.16	19.00	61.82	20.09	61.46	21.17	61.08	22.24
66.00	63.44	18.18	63.11	19.29	62.77	20.39	62.40	21.49	62.02	22.58
67.00	64.40	18.46	64.07	19.58	63.72	20.70	63.35	21.82	62.96	22.92
68.00	65.36	18.74	65.02	19.88	64.67	21.01	64.30	22.15	63.90	23.26
69.00	66.32	19.02	65.98	20.17	65.62	21.32	65.24	22.47	64.84	23.60
70.00	67.28	19.29	66.94	20.47	66.57	21.63	66.19	22.79	65.78	23.94
71.00	68.25	19.57	67.89	20.76	67.53	21.94	67.13	23.12	66.72	24.28
72.00	69.20	19.84	68.85	21.05	68.48	22.25	68.07	23.45	67.66	24.62
73.00	70.16	20.12	69.81	21.34	69.43	22.56	69.02	23.77	68.60	24.97
74.00	71.12	20.39	70.76	21.63	70.38	22.87	69.96	24.10	69.54	25.31
75.00	72.09	20.67	71.72	21.92	71.33	23.18	70.91	24.42	70.48	25.65
76.00	73.05	20.94	72.68	22.21	72.28	23.48	71.86	24.75	71.42	25 99
77.00	74.02	21.22	73.63	22.50	73.23	23.79	72.80	25.08	72.36	26.33
78.00	74 98	21.49	74.59	22.80	74.18	24.10	73.75	25 40	73.30	26.67
79.00	75.94	21.77	75.54	23.09	75.13	24.41	74.69	25.73	74.24	27.02
80.00	76.90	22.03	76.50	23.39	76.08	24.72	75.64	26.05	75.18	27.36
81.00	77.86	22.32	77.46	23.68	77.03	25.03	76.58	26.38	76.12	27.70
82.00	78.82	22.59	78.41	23 97	77.99	25.34	77.53	26.71	77.06	28.04
83.00	79.78	22.87	79.37	24.26	78.94	25.65	78.47	27.02	78.00	28.39
84.00	80.75	23.15	80.32	24.55	79.89	25.96	79.42	27.35	78.94	28.73
85 00	81.71	23.42	81.28	24.85	80.84	26.26	80.37	27.67	79.88	29 07
86.00	82.67	23.70	82.24	25.14	81.79	26.57	81.31	28.00	80.82	29.41
87.00	83.63	23.97	83.19	25.43	82.74	26.88	82.26	28.33	81.76	29.75
88.00	84.59	24.25	84.15	25.72	83.69	27.19	83.20	28.65	82.70	30.09
89.00	85.55	24.53	85.11	26.02	84.64	27.50	84.15	28.98	83.64	30.44
90.00	86.51	24.81	86.07	26.31	85.60	27.81	85.10	29.30	84.57	30.78
91.00	87.47	25.07	87.02	26.60	86.55	28.12	86.04	29.63	85.51	31.12
92.00	88.44	25.35	87.98	26.90	87.50	28.43	86.98	29.95	86.45	31.46
93.00	89.40	25.63	88.93	27.19	88.45	28.74	87.93	30.28	87.39	31.81
94.00	90.36	25.90	89.89	27.48	89.40	29.04	88.87	30.60	88.33	32.15
95.00	91.32	26.18	90.84	27.77	90.35	29.35	89.82	30.93	89.27	32.49
96.00	92.28	26.45	91.80	28.06	91.30	29.66	90.77	31.26	90.21	32.83
97.00	93.24	26.73	92.76	28.36	92.26	29.97	91.72	31.58	91.15	33.17
98.00	94.20	27.01	93.71	28.65	93.21	30.28	92.66	31.91	92.09	33.51
99.00	95.16	27.28	94.67	28.94	94.16	30.59	93.61	32.23	93.03	33.86
100.00	96.13	27.56	95.63	29.24	95.11	30.90	94.55	32.56	93.97	34.20
Dist.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat
	74°		73°		72°		71°		70°	

	21°		22°		23°		24°		25°	
Dist.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.
1.00	0.93	0.36	0.93	0.37	0.92	0.39	0.91	0.41	0.91	0.42
2.00	1.87	0.72	1.85	0.75	1.84	0.78	1.83	0.81	1.81	0.84
3.00	2.80	1.08	2.78	1.12	2.76	1.17	2.74	1.22	2.72	1.27
4.00	3.73	1.43	3.71	1.50	3.68	1.56	3.65	1.63	3.63	1.69
5.00	4.67	1.79	4.64	1.87	4.60	1.95	4.57	2.03	4.53	2.11
6.00	5.60	2.15	5.56	2.25	5.52	2.34	5.48	2.44	5.44	2.54
7.00	6.54	2.51	6.49	2.62	6.44	2.74	6.39	2.85	6.34	2.96
8.00	7.47	2.87	7.42	2.00	7.36	3.13	7.31	3.25	7.25	3.38
9.00	8.40	3.23	8.34	3.37	8.28	3.52	8.22	3.66	8.16	3.80
10.00	9.34	3.58	9.27	3.75	9.20	3.91	9.14	4.07	9.06	4.23
11.00	10.27	3.94	10.20	4.12	10.13	4.30	10.05	4.47	9.97	4.65
12.00	11.20	4.30	11.13	4.50	11.05	4.69	10.96	4.88	10.88	5.07
13.00	12.14	4.66	12.05	4.87	11.97	5.08	11.88	5.29	11.78	5.49
14.00	13.07	5.02	12.98	5.25	12.89	5.47	12.79	5.69	12.69	5.92
15.00	14.00	5.38	13.91	5.62	13.81	5.86	13.70	6.10	13.59	6.34
16.00	14.94	5.73	14.84	6.00	14.73	6.25	14.62	6.51	14.50	6.76
17.00	15.87	6.09	15.76	6.36	15.65	6.64	15.53	6.91	15.41	7.18
18.00	16.80	6.45	16.69	6.74	16.57	7.03	16.44	7.32	16.31	7.61
19.00	17.74	6.81	17.62	7.11	17.49	7.42	17.36	7.73	17.22	8.03
20.00	18.67	7.17	18.54	7.49	18.41	7.81	18.27	8.13	18.13	8.45
21.00	19.61	7.53	19.47	7.86	19.33	8.20	19.18	8.54	19.03	8.87
22.00	20.54	7.89	20.40	8.24	20.25	8.59	20.09	8.95	19.94	9.30
23.00	21.47	8.25	21.33	8.61	21.17	8.98	21.01	9.35	20.84	9.72
24.00	22.41	8.60	22.25	8.99	22.09	9.37	21.92	9.76	21.75	10.14
25.00	23.34	8.96	23.18	9.36	23.01	9.77	22.84	10.17	22.66	10.57
26.00	24.27	9.32	24.11	9.74	23.93	10.16	23.75	10.57	23.56	10.99
27.00	25.21	9.68	25.04	10.11	24.85	10.55	24.66	10.98	24.47	11.41
28.00	26.14	10.04	25.96	10.49	25.77	10.94	25.58	11.39	25.38	11.83
29.00	27.07	10.40	26.89	10.86	26.69	11.33	26.49	11.79	26.28	12.26
30.00	28.01	10.75	27.82	11.24	27.61	11.72	27.41	12.20	27.19	12.68
31.00	28.94	11.11	28.74	11.61	28.54	12.11	28.32	12.61	28.09	13.10
32.00	29.87	11.47	29.67	11.99	29.46	12.50	29.24	13.01	29.00	13.52
33.00	30.81	11.83	30.60	12.36	30.38	12.89	30.15	13.42	29.91	13.95
34.00	31.74	12.19	31.53	12.74	31.30	13.28	31.06	13.83	30.81	14.37
35.00	32.67	12.55	32.44	13.11	32.22	13.67	31.98	14.23	31.72	14.79
36.00	33.61	12.91	33.38	13.49	33.14	14.06	32.89	14.64	32.63	15.21
37.00	34.54	13.27	34.31	13.86	34.06	14.45	33.80	15.05	33.53	15.64
38.00	35.47	13.62	35.24	14.24	34.98	4.84	34.73	15.45	34.44	16.06
39.00	36.41	13.98	36.16	14.61	35.90	15.23	35.63	15.86	35.34	16.48
40.00	37.34	14.33	37.09	14.98	36.82	15.63	36.54	16.27	36.25	16.90
41.00	38.27	14.70	38.02	15.35	37.74	16.02	37.46	16.67	37.16	17.33
42.00	39.21	15.06	38.94	15.73	38.66	16.41	38.37	17.08	38.06	17.75
43.00	40.14	15.42	39.87	16.10	39.58	16.80	39.28	17.49	38.97	18.17
44.00	41.07	15.77	40.80	16.48	40.50	17.19	40.19	17.89	39.88	18.60
45.00	42.01	16.13	41.73	16.85	41.42	17.58	41.11	18.30	40.78	19.02
46.00	42.94	16.49	42.65	17.23	42.34	17.97	42.02	18.71	41.69	19.44
47.00	43.87	16.85	43.58	17.60	43.26	18.36	42.94	19.11	42.59	19.86
48.00	44.81	17.21	44.51	17.98	44.18	18.76	43.85	19.52	43.50	20.29
49.00	45.74	17.57	45.44	18.35	45.10	19.15	44.76	19.93	44.41	20.71
50.00	46.68	17.92	46.36	18.74	46.02	19.54	45.68	20.34	45.32	21.13
Dist.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat	Dep.	Lat.	Dep.	Lat.
	69°		68°		67°		66°		65°	

	21°		22°		23°		24°		25°	
Diſt.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.
51.00	47.61	18.29	47.28	19.10	46.95	19.93	46.59	20.74	46.22	21.55
52.00	48.55	18.64	48.21	19.48	47.87	20.32	47.50	21.15	47.13	21.98
53.00	49.48	18.99	49.14	19.85	48.79	20.71	48.42	21.55	48.03	22.40
54.00	50.41	19.35	50.06	20.23	49.71	21.10	49.33	21.96	48.94	22.82
55.00	51.35	19.71	50.99	20.60	50.63	21.49	50.24	22.37	49.85	23.24
56.00	52.28	20.07	51.92	20.98	51.55	21.88	51.16	22.77	50.75	23.67
57.00	53.21	20.42	52.84	21.35	52.47	22.27	52.07	23.18	51.66	24.09
58.00	54.15	20.78	53.77	21.73	53.39	22.66	52.98	23.59	52.56	24.51
59.00	55.08	21.14	54.70	22.10	54.31	23.05	53.89	23.99	53.47	24.93
60.00	56.01	21.50	55.63	22.48	55.23	23.44	54.81	24.40	54.38	25.36
61.00	56.95	21.86	56.55	22.85	56.15	23.83	55.72	24.81	55.28	25.78
62.00	57.88	22.22	57.48	23.23	57.07	24.22	56.64	25.22	56.19	26.20
63.00	58.81	22.57	58.41	23.60	57.99	24.61	57.55	25.63	57.09	26.63
64.00	59.75	22.93	59.34	23.98	58.91	25.01	58.46	26.03	58.00	27.05
65.00	60.68	23.29	60.26	24.35	59.83	25.40	59.38	26.44	58.91	27.47
66.00	61.61	23.65	61.19	24.73	60.75	25.79	60.29	26.85	59.81	27.89
67.00	62.55	24.01	62.12	25.10	61.67	26.18	61.20	27.25	60.72	28.32
68.02	63.48	24.37	63.04	25.48	62.59	26.57	62.12	27.66	61.63	28.74
69.00	64.41	24.72	63.97	25.85	63.51	26.96	63.03	28.07	62.53	29.16
70.00	65.35	25.08	64.90	26.22	64.43	27.35	63.95	28.47	63.44	29.58
71.00	66.28	25.44	65.83	26.59	65.36	27.74	64.86	28.88	64.35	30.01
72.00	67.22	25.80	66.75	26.97	66.28	28.13	65.77	29.29	65.25	30.43
73.00	68.15	26.16	67.68	27.34	67.20	28.52	66.68	29.69	66.16	30.85
74.00	69.08	26.52	68.61	27.72	68.12	28.91	67.60	30.10	67.06	31.27
75.00	70.02	26.88	69.54	28.09	69.04	29.31	68.51	30.51	67.97	31.70
76.00	70.95	27.24	70.46	28.47	69.96	29.70	69.42	30.91	68.88	32.12
77.00	71.88	27.59	71.39	28.84	70.88	30.09	70.34	31.32	69.78	32.54
78.00	72.82	27.95	72.32	29.21	71.80	30.48	71.25	31.73	70.69	32.96
79.00	73.75	28.31	73.24	29.59	72.72	30.87	72.17	32.13	71.59	33.39
80.00	74.69	28.67	74.17	29.97	73.64	31.26	73.08	32.54	72.50	33.81
81.00	75.62	29.03	75.10	30.34	74.56	31.65	73.99	32.95	73.41	34.23
82.00	76.55	29.39	76.03	30.72	75.48	32.04	74.90	33.35	74.31	34.66
83.00	77.49	29.74	76.95	31.09	76.40	32.43	75.82	33.76	75.22	35.08
84.00	78.42	30.10	77.88	31.47	77.32	32.82	76.73	34.17	76.13	35.50
85.00	79.35	30.46	78.81	31.84	78.24	33.21	77.65	34.57	77.03	35.92
86.00	80.29	30.82	79.74	32.21	79.16	33.60	78.56	34.98	77.94	36.35
87.00	81.22	31.18	80.66	32.59	80.08	33.99	79.48	35.39	78.85	36.77
88.00	82.15	31.54	81.59	32.97	81.00	34.38	80.39	35.79	79.75	37.19
89.00	83.09	31.90	82.52	33.34	81.92	34.77	81.31	36.20	80.66	37.61
90.00	84.02	32.26	83.45	33.71	82.84	35.17	82.22	36.61	81.57	38.04
91.00	84.95	32.61	84.38	34.08	83.77	55.56	83.14	37.01	82.47	38.46
92.00	85.89	32.97	85.31	34.46	84.69	35.95	84.05	37.42	83.38	38.88
93.00	86.82	33.32	86.24	34.83	85.61	36.34	84.96	37.83	84.28	39.30
94.00	87.75	33.69	87.16	35.20	86.53	36.73	85.88	38.23	85.19	39.73
95.00	88.69	34.05	88.09	35.58	87.45	37.12	86.79	38.64	86.10	40.15
96.00	89.62	34.41	89.02	35.95	88.37	37.51	87.70	39.05	87.00	40.57
97.00	90.55	34.76	89.94	36.33	89.29	37.90	88.62	39.45	87.91	40.99
98.00	91.49	35.12	90.87	36.70	90.21	38.29	89.53	39.86	88.82	41.42
99.00	92.42	35.48	91.80	37.08	91.13	38.68	90.44	40.27	89.72	41.84
100.00	93.36	35.84	92.72	37.46	92.05	39.07	91.36	40.67	90.63	42.26
Diſt.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.
	69°		68°		67°		66°		65°	

	26°		27°		28°		29°		30°	
Diſt.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.
1.00	0.90	0.44	0.89	0.45	0.88	0.47	0.87	0.48	0.87	0.50
2.00	1.80	0.88	1.78	0.91	1.77	0.94	1.75	0.97	1.73	1.00
3.00	2.70	1.32	2.67	1.36	2.65	1.41	2.62	1.45	2.60	1.50
4.00	3.60	1.75	3.57	1.82	3.53	1.88	3.50	1.94	3.46	2.00
5.00	4.49	2.19	4.46	2.27	4.41	2.35	4.37	2.42	4.33	2.50
6.00	5.39	2.63	5.35	2.72	5.30	2.82	5.25	2.91	5.20	3.00
7.00	6.29	3.07	6.24	3.18	6.18	3.29	6.12	3.39	6.06	3.50
8.00	7.19	3.51	7.13	3.63	7.06	3.76	7.00	3.88	6.93	4.00
9.00	8.09	3.95	8.02	4.09	7.95	4.23	7.87	4.36	7.79	4.50
10.00	8.98	4.38	8.92	4.54	8.83	4.69	8.75	4.85	8.66	5.00
11.00	9.89	4.82	9.80	4.99	9.71	5.16	9.62	5.33	9.53	5.50
12.00	10.79	5.26	10.69	5.45	10.59	5.63	10.50	5.82	10.39	6.00
13.00	11.68	5.70	11.58	5.90	11.48	6.10	11.37	6.30	11.26	6.50
14.00	12.58	6.14	12.47	6.36	12.36	6.57	12.25	6.79	12.12	7.00
15.00	13.48	6.58	13.36	6.81	13.24	7.04	13.12	7.27	12.99	7.50
16.00	14.38	7.01	14.26	7.26	14.13	7.51	14.00	7.75	13.86	8.00
17.00	15.28	7.45	15.15	7.72	15.01	7.98	14.87	8.24	14.72	8.50
18.00	16.18	7.89	16.04	8.17	15.89	8.45	15.74	8.73	15.59	9.00
19.00	17.08	8.33	16.93	8.63	16.78	8.92	16.61	9.21	16.45	9.50
20 00	17.98	8.77	17.82	9.08	17.66	9.39	17.49	9.70	17.32	10.00
21.00	18.87	9.20	18.71	9.53	18.54	9.86	18.36	10.18	18.19	10.50
22.00	19.77	9.64	19.60	9.99	19.42	10.33	19.24	10.67	19.05	11.00
23.00	20.67	10.08	20.50	10.44	20.31	10.79	20.11	11.15	19.92	11.50
24.00	21.57	10.52	21.39	10.90	21.19	11.26	20.99	11.64	20.78	12.00
25.00	22.47	10 96	22.28	11.35	22.07	11.73	21.86	12.12	21.65	12.50
26.00	23.37	11.39	23.17	11.80	22.96	12.20	22.74	12.61	22.52	13.00
27.00	24.27	11.83	24.06	12.26	23.84	12.67	23.61	13.09	23.38	13.50
28.00	25.17	12.27	24.95	12.71	24.72	13.14	24.49	13.57	24.25	14.00
29.00	26.06	12.71	25.84	13.17	25.60	13.61	25.36	14.06	25.11	14.50
30.00	26.96	13.15	26.73	13.62	26.49	14.08	26.24	14.54	25.98	15.00
31.00	27.86	13.59	27.62	14.08	27.37	14.55	27.11	15.03	26.85	15.50
32.00	28.76	14.02	28.51	14.53	28.25	15.02	27.99	15.51	27.71	16.00
33.00	29.65	14.46	29.40	14.98	29.14	15.49	28.86	16.00	28.58	16.50
34.00	30.56	14.90	30.29	15.44	30.02	15.96	29.74	16.48	29.44	17.00
35.00	31.46	15.34	31.19	15.89	30.90	16.43	30.61	16.97	30.31	17.50
36.00	32.36	15.78	32.08	16.35	31.79	16.89	31.49	17.45	31.18	18.00
37.00	33.25	16.21	32.97	16.80	32.67	17.36	32.36	17.94	32.04	18.50
38.00	34.15	16.65	33.86	17.25	33 55	17.83	33.24	18.42	32.91	19.00
39.00	35.05	17.09	34.75	17.71	34.43	18.30	34.11	18.91	33.77	19.50
40.00	35.95	17.53	35.64	18.16	35.32	18.78	34.98	19.39	34.64	20 00
41.00	36.85	17.97	36.53	18.62	36.20	19.25	35.85	19.88	35.51	20.50
42.00	37.75	18.40	37.42	19.07	37.08	19.72	36.73	20.36	36.37	21.00
43.00	38.65	18.84	38.31	19.52	37.97	20.19	37.60	20.85	37.24	21.50
44 00	39.55	19.28	39.20	19.98	38.85	20.66	38.48	21.33	38.10	22.00
45.00	40.45	19.72	40.10	20.43	39.73	21.12	39.35	21.82	38.97	22.50
46 00	41.34	20.16	40.99	20.89	40.61	21.59	40.23	22.30	39.84	23.00
47.00	42.24	20.60	41.88	21.34	41.49	22.06	41.10	22.79	40.70	23.50
48.00	43.14	21.04	42.77	21.79	42.38	22.53	41.97	23.27	41.57	24.00
49.00	44.04	21.48	43.66	22.25	43.26	23 00	42.85	23.75	42.43	24.50
50.00	44.94	21.92	44.55	22.70	44.15	23.47	43.73	24.24	43.30	25.00
Diſt.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.
	64°		63°		62°		61°		60°	

	26°		27°		28°		29°		30°	
Dist.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep	Lat.	Dep.	Lat.	Dep.
51.00	45.84	22.35	45.45	23.16	45.03	23.94	44.60	24.73	44.17	25.50
52.00	46.74	22.79	46.34	23.61	45.91	24.41	45.48	25.21	45.03	26.00
53.00	47.64	23.22	47.23	24.07	46.80	24.88	46.35	25.70	45.90	26.50
54.00	48 54	23.66	48.12	24.52	47.68	25.35	47.23	26.18	46.76	27.00
55.00	49.43	24.10	49.01	24.97	48.56	25.82	48.10	26.67	47.63	27.50
56.00	50.33	24.54	49.90	25.43	49.44	26.29	48.98	27.15	48.50	28.00
57.00	51.23	24.98	50.79	25.88	50.33	26.76	49.85	27.64	49.36	28.50
58.00	52.13	25.42	51.68	26.34	51.21	27.23	50.73	28.12	50.23	29.00
59.00	53.03	25.86	52.58	26.79	52.09	27.69	51.60	28.61	51.09	29.50
60.00	53.93	26.30	53.46	27.24	52.98	28.17	52.48	29.09	51.96	30.00
61.00	54.83	26.74	54.36	27.70	53.86	28.03	53.35	29.57	52.83	30.50
62.00	55.73	27.17	55.25	28.15	54.74	29.10	54.23	30.06	53.69	31.00
63.00	56.62	27.61	56.14	28.61	55.62	29.57	55.10	30.54	54.56	31.50
64.00	57.52	28.05	57.03	29.06	56.52	30.04	55.98	31.03	55.42	32.00
65.00	58.42	28.49	57.92	29.51	57.39	30.51	56.84	31.51	56.29	32.50
66.00	59.32	28.93	58.81	29.97	58.27	30.98	57.72	32.00	57.16	33.00
67.00	60.22	29.36	59.70	30.42	59.16	31.45	58.59	32.48	58.02	33.50
68.00	61.12	29.80	60.59	30.88	60.04	31.92	59.47	32.97	58.89	34.00
69.00	62.02	30.24	61.48	31.33	60.92	32.39	60.34	33.45	59.75	34.50
70.00	62.92	30.69	62.37	31.78	61.81	32.86	61.22	33.94	60.62	35.00
71.00	63.81	31.12	63.27	32.24	62.69	33.33	62.09	34.42	61.49	35.50
72.00	64.71	31.56	64.16	32.69	63.57	33.79	62.97	34.91	62.35	36.00
73.00	65.61	32.00	65.05	33.15	64.45	34.26	63.84	35.39	63.22	36.50
74.00	66.51	32.44	65.94	33.60	65.34	34.73	64.71	35.88	64.08	37.00
75.00	67.41	32.88	66.83	34.06	66.22	35.20	65.58	36.36	64.95	37.50
76.00	68.31	33.32	67.72	34.51	67.10	35.67	66.46	36.85	65.82	38.00
77.00	69.21	33.75	68.61	34.96	67.99	36.14	67.33	37.33	66.68	38.50
78.00	70.11	34.19	69.51	35.42	68.87	36.61	68.21	37.82	67.55	39.00
79.00	71.01	34.63	70.40	35.87	69.75	37.08	69.09	38.30	68.41	39.50
80.00	71.90	35.07	71.28	36.32	70.64	37.56	69.97	38.78	69.28	40.00
81.00	72.80	35.51	72.18	36.78	71.53	38.02	70.84	39.27	70.15	40.50
82.00	73.70	35.95	73.07	37.23	72.40	38.49	71.72	39.75	70.91	41.00
83.00	74.60	36.38	73.96	37.69	73.28	38.96	72.60	40.24	71.88	41.50
84.00	75.50	36.82	74.85	38.14	74.17	39.43	73.47	40.73	72.74	42.00
85.00	76.40	37.26	75.74	38.60	75.05	39.89	74.35	41.21	73.61	42.50
86.00	77.30	37.70	76.63	39.05	75.93	40.36	75.22	41.70	74.48	43.00
87.00	78.20	38.14	77.52	39.50	76.82	40.83	76.10	42.18	75.34	43.50
88.00	79.10	38.58	78.41	39.96	77.70	41.30	76.97	42.67	76.21	44.00
89.00	79.99	39.01	79.30	40.41	78.58	41.78	77.85	43.15	77.07	44.50
90.00	80.89	39.45	80.19	40.86	79.47	42.25	78.72	43.63	77.94	45.00
91.00	81.79	39.89	81.08	41.31	80.35	42.71	79.60	44.12	78.81	45.50
92.00	82.69	40.33	81.97	41.76	81.23	43.18	80.47	44.61	79.67	46.00
93.00	83.59	40.77	82.86	42.22	82.11	43.65	81.35	45.09	80.54	46.50
94.00	84.49	41.20	83.76	42.67	83.00	44.12	82.22	45.57	81.40	47.00
95.00	85.39	41.64	84.65	43.13	83.88	44.59	83.10	46.06	82.27	47.50
96.00	86.29	42.08	85.54	43.58	84.76	45.06	83.97	46.54	83.14	48.00
97.00	87.18	42.52	86.43	44.04	85.65	45.53	84.85	47.03	84.00	48.50
98.00	88.08	42.96	87.32	44.50	86.54	46.00	85.72	47.51	84.87	49.00
99.00	88.98	43.39	88.21	44.94	87.41	46.47	86.60	48.00	85.74	49.50
100.00	89.88	43.84	89.10	45.40	88.29	46.95	87.46	48.48	86.60	50.00
Dist.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.
	64°		63°		62°		61°		60°	

	31°		32°		33°		34°		35°	
Dist.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.
1.00	0.86	0.51	0.85	0.53	0.84	0.54	0.83	0.56	0.82	0.57
2.00	1.71	1.03	1.70	1.06	1.68	1.09	1.66	1.12	1.64	1.15
3.00	2.57	1.55	2.54	1.59	2.52	1.63	2.49	1.68	2.46	1.72
4.00	3.43	2.06	3.39	2.12	3.36	2.18	3.32	2.24	3.28	2.29
5.00	4.29	2.58	4.24	2.65	4.20	2.72	4.14	2.80	4.10	2.87
6.00	5.14	3.09	5.09	3.18	5.03	3.27	4.97	3.36	4.92	3.44
7.00	6.06	3.61	5.94	3.71	5.87	3.81	5.80	3.91	5.73	4.02
8.00	6.86	4.12	6.78	4.24	6.71	4.36	6.63	4.47	6.55	4.59
9.00	7.71	4.64	7.63	4.77	7.55	4.90	7.46	5.03	7.37	5.16
10.00	8.57	5.15	8.48	5.30	8.39	5.45	8.29	5.59	8.19	5.74
11.00	9.43	5.67	9.33	5.83	9.23	5.99	9.11	6.15	9.01	6.31
12.00	10.29	6.18	10.18	6.36	10.07	6.55	9.94	6.71	9.83	6.89
13.00	11.14	6.70	11.02	6.89	10.91	7.08	10.77	7.27	10.65	7.46
14.00	12.00	7.21	11.87	7.42	11.75	7.62	11.60	7.83	11.47	8.04
15.00	12.86	7.73	12.72	7.95	12.59	8.17	12.43	8.39	12.29	8.61
16.00	13.71	8.24	13.57	8.48	13.42	8.71	13.26	8.94	13.11	9.18
17.00	14.57	8.76	14.42	9.01	14.26	9.26	14.08	9.50	13.93	9.76
18.00	15.43	9.27	15.26	9.54	15.10	9.80	14.91	10.06	14.74	10.33
19.00	16.29	9.79	16.11	10.07	15.94	10.35	15.74	10.62	15.56	10.91
20.00	17.14	10.30	16.96	10.60	16.78	10.89	16.57	11.18	16.38	11.47
21.00	18.00	10.82	17.80	11.13	17.62	11.44	17.40	11.74	17.21	12.05
22.00	18.86	11.33	18.65	11.66	18.46	11.98	18.23	12.30	18.03	12.62
23.00	19.71	11.85	19.50	12.19	19.30	12.52	19.06	12.86	18.85	13.19
24.00	20.57	12.36	20.35	12.72	20.13	13.07	19.89	13.42	19.67	13.77
25.00	21.43	12.88	21.20	13.25	20.97	13.61	20.72	13.98	20.48	14.34
26.00	22.29	13.39	22.04	13.78	21.81	14.16	21.55	14.54	21.30	14.91
27.00	23.14	13.91	22.89	14.31	22.65	14.70	22.38	15.09	22.12	15.48
28.00	24.00	14.42	23.74	14.84	23.49	15.25	23.21	15.65	22.94	16.06
29.00	24.86	14.94	24.59	15.37	24.33	15.79	24.04	16.21	23.76	16.63
30.00	25.71	15.45	25.44	15.90	25.17	16.34	24.87	16.78	24.58	17.21
31.00	26.57	15.97	26.28	16.43	26.01	16.88	25.70	17.33	25.39	17.78
32.00	27.43	16.48	27.13	16.96	26.85	17.43	26.53	17.89	26.22	18.35
33.00	28.29	17.00	27.98	17.49	27.69	17.97	27.36	18.45	27.04	18.93
34.00	29.14	17.51	28.82	18.02	28.52	18.51	28.18	19.01	27.86	19.49
35.00	30.00	18.03	29.67	18.55	29.36	19.06	29.01	19.57	28.68	20.07
36.00	30.86	18.54	30.52	19.08	30.20	19.60	29.84	20.13	29.49	20.64
37.00	31.71	19.06	31.37	19.61	31.04	20.15	30.67	20.69	30.31	21.22
38.00	32.57	19.57	32.22	20.14	31.88	20.69	31.50	21.25	31.14	21.79
39.00	33.43	20.09	33.06	20.67	32.72	21.24	32.33	21.81	31.96	22.35
40.00	34.29	20.60	33.92	21.20	33.56	21.79	33.16	22.37	32.77	22.94
41.00	35.14	21.12	34.76	21.73	34.40	22.33	33.99	22.92	33.59	23.51
42.00	36.00	21.63	35.61	22.26	35.23	22.87	34.82	23.48	34.40	24.08
43.00	36.86	22.15	36.46	22.79	36.07	23.42	35.65	24.04	35.23	24.65
44.00	37.71	22.66	37.30	23.32	36.91	23.96	36.48	24.60	36.05	25.23
45.00	38.57	23.18	38.15	23.85	37.75	24.50	37.31	25.16	36.87	25.80
46.00	39.43	23.69	39.01	24.38	38.59	25.05	38.14	25.72	37.69	26.37
47.00	40.29	24.21	39.86	24.91	39.43	25.59	38.97	26.28	38.50	26.94
48.00	41.14	24.72	40.71	25.44	41.27	26.14	39.80	26.84	39.32	27.52
49.00	42.00	25.24	41.55	25.97	40.11	26.68	40.62	27.40	40.14	28.10
50.00	42.86	25.75	42.40	26.50	41.94	27.23	41.45	27.96	40.96	28.98
Dist.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.
	59°		58°		57°		56°		55°	

	31°		32°		33°		34°		35°	
Dist.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.
51.00	43.71	26.27	43.25	27.03	42.78	27.79	42.28	28.51	41.78	29.25
52.00	44.57	26.78	44 10	27.56	43.62	28.33	43.11	29.07	42.60	29.82
53.00	45.44	27.30	44.95	28.09	44.46	28.88	43.94	29.63	43.41	30.39
54.00	46.29	27.81	45.79	28.62	45.30	29.42	44.77	30.19	44.24	30.96
55.00	47.14	28.33	46.64	29.15	16.14	29.97	45.60	30.75	45.06	31.54
56.00	48.00	28.84	47.49	29.68	46.98	30.51	46.43	31.31	45.88	32.12
57.00	48.86	29.36	48.34	30.21	47.82	31.06	47.26	31.87	46.70	32.70
58.00	49.71	29.87	49.19	30.74	48.66	31.60	48.09	32.43	47.51	33.27
59.00	50.57	30.39	50.03	31.27	49.49	32.14	48.92	32.99	48.33	33.84
60.00	51.43	30.90	50.88	31.80	50.33	32.68	49.74	33.55	49.15	34.42
61.00	52.29	31.42	51.73	32.33	51.17	33.22	50.57	34.10	49.97	34.98
62.00	53.14	31.93	52.58	32.86	52.01	33.77	51.40	34.66	50.79	35.56
63.00	54.00	32.45	53.43	33.39	52.85	34.32	52.23	35.22	51.61	36.14
64.00	54.86	32.96	54.27	33.92	53.69	34.86	53.06	35.79	52.42	36.72
65.00	55.71	33.48	55.12	34.45	54.53	35.41	53.89	36.34	53.25	37.29
66.00	56.57	33.99	55.97	34.98	55.36	35.95	54.72	36.90	54.07	37.86
67.00	57.43	34.51	56.81	35.51	56.20	36.49	55.55	37.46	54.89	38.44
68.00	58.29	35.02	57.66	36.04	57.04	37.04	56.38	38.02	55.71	39.00
69.00	59.14	35.54	58.51	36.57	57.88	37.58	57.20	38.58	56.52	39.57
70.00	60.00	36.05	59.36	37.09	58.72	38.12	58.03	39.14	57.34	40.15
71.00	60.86	36.57	60.21	37.62	59.56	38.67	58.86	39.70	58.16	40.72
72.00	61.71	37.08	61.05	38.15	60.39	39.21	59.69	40.26	58.98	41.29
73.00	62.57	37.60	61.90	38.68	61.23	39.77	60.52	40.82	59.80	41.87
74.00	63.43	38.11	62.75	39.21	62.07	40.31	61.35	41.38	60.62	42.44
75.00	64.29	38.63	63.60	39.74	62.91	40.85	62.18	41.93	61.44	43.02
76.00	65.14	39.14	64.45	40.27	63.75	41.40	63.00	42.49	62.27	43.59
77.00	66.00	39.66	65.29	40.80	64 59	41.94	63.83	43.05	63.09	44.16
78.00	66.86	40.17	66.14	41.33	65.43	42.48	64.66	43.61	63.91	44.74
79.00	67.71	40.69	66.99	41.86	66.27	43.03	65.49	44.17	64.73	45.31
80.00	68.57	41.20	67.84	42.39	67.10	43.57	66.32	44.74	65.54	45.89
81.00	69.43	41.72	68.68	42.92	67.94	44.11	67.15	45.29	66.36	46.46
82.00	70.29	42.23	69.53	43.45	68.78	44.66	67.98	45.85	67.18	17.04
83.00	71.14	42.75	70.38	43.98	69.62	45.20	68.80	46.41	68.00	47.61
84.00	72.00	43.26	71.23	44.51	70.46	45.76	69.63	46.97	68.82	48.18
85 00	72.86	43.78	72.07	45.04	71.30	46.30	70.46	47.52	69.64	48.76
86.00	73.71	44.29	72.93	45.57	72.14	46.84	71.29	48.08	70.46	49.33
87.00	74.57	44.81	73.77	46.10	72.98	47.39	72.12	48.64	71.28	49.91
88.00	75.43	45.32	74.62	46.63	73.81	47.93	72.95	49.20	72.10	50.47
89.00	76.29	45.84	75.47	47.16	74.65	48.47	73.78	49.76	72.92	51.05
90.00	77.14	46.35	76.32	47.69	75.59	49.02	74.61	50.33	73.73	51.62
91.00	78.00	46.87	77.16	48.22	76.33	49.56	75.44	50.89	74.55	52.19
92.00	78.86	47.38	78.02	48.75	77.17	50.10	76.27	51.45	75.37	52.77
93.00	79.71	47.90	78.87	49.28	78.01	50.65	77.10	52.00	76.19	53.34
94 00	80.57	48.41	79.72	49.81	78.85	51.19	77.93	52.56	77.01	53.91
95.00	81.43	48.93	80.56	50.34	79.68	51.75	78.76	53.12	77.83	54.48
96.00	82.29	49.44	81.41	50.87	80.52	52.29	79.59	53.68	78.65	55.06
97.00	83.14	49.96	82.26	51.40	81.36	52.83	80.42	54.24	79.47	55.63
98.00	84.00	50.47	83.11	51.93	82.20	53.38	81.25	54.80	80.29	56.21
99.00	84.86	50.99	83.96	52.46	83.04	53.92	82.08	55.36	81.11	56.78
100.00	85.72	51.50	84.80	52.99	83.88	54.46	82.90	55.92	81.92	57.36
Dist.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat
	59°		58°		57°		56°		55°	

	36°		37°		38°		39°		40°	
Dist.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.
1.00	0.81	0.59	0.80	0.60	0.79	0.61	0.78	0.63	0.77	0.64
2.00	1.62	1.18	1.60	1.20	1.58	1.23	1.55	1.26	1.53	1.29
3.00	2.43	1.76	2.40	1.81	2.36	1.85	2.33	1.89	2.30	1.93
4.00	3.24	2.35	3.19	2.41	3.15	2.46	3.11	2.52	3.06	2.57
5.00	4.05	2.94	3.99	3.01	3.94	3.08	3.89	3.15	3.83	3.21
6.00	4.85	3.53	4.79	3.61	4.73	3.69	4.66	3.78	4.60	3.86
7.00	5.66	4.11	5.59	4.21	5.52	4.31	5.44	4.41	5.36	4.50
8.00	6.47	4.70	6.39	4.81	6.30	4.93	6.22	5.03	6.13	5.14
9.00	7.28	5.29	7.19	5 42	7.09	5.54	6.99	5.66	6.89	5.79
10.00	8.09	5 88	7.99	6.02	7.88	6.16	7.77	6.29	7.66	6.43
11.00	8.90	6.46	8.79	6.62	8.66	6.77	8.54	6.92	8.43	7.07
12.00	9.71	7.05	9.58	7.22	9.45	7.39	9.32	7.55	9.19	7.71
13.00	10.52	7.64	10.38	7.82	10.24	8.00	10.10	8.18	9.96	8.36
14.00	11.33	8.23	11.18	8.43	11.03	8.62	10.88	8.81	10.72	9.00
15.00	12.14	8.82	11.98	9.03	11.82	9.23	11.65	9.44	11.49	9.64
16.00	12.94	9.41	12.78	9.63	12.60	9.85	12.43	10.07	12.26	10.28
17.00	13.75	10.00	13.58	10.23	13.39	10.46	13.21	10.70	13.02	10.93
18.00	14.56	10.59	14.38	10.83	14.18	11.08	13.99	11.33	13.79	11.57
19.00	15.37	11.18	15.17	11.44	14.97	11.69	14.77	11.96	14.55	12.21
20.00	16.18	11.76	15.97	12.04	15.76	12.31	15.54	12.59	15.32	12.86
21.00	16.99	12.35	16.77	12.64	16.55	12.93	16.32	13.22	16.08	13.50
22.00	17.80	12.94	17.57	13.24	17.34	13.54	17.10	13.85	16.85	14.14
23.00	18.61	13.53	18.37	13.84	18.13	14.16	17.88	14.48	17.62	14.79
24.00	19.42	14.11	19.17	14.44	18.92	14.77	18.65	15.11	18.38	15.43
25.00	20.22	14.70	19.97	15.05	19.70	15.39	19.43	15.74	19.15	16.07
26.00	21.03	15.29	20.77	15.65	20.49	16.00	20.21	16.37	19.91	16.71
27.00	21.84	15.88	21.56	16.25	21.28	16.62	20.98	17.00	20.68	17.36
28.00	22.65	16.46	22.36	16.85	22.06	17.23	21.77	17.63	21.45	18.00
29.00	23.46	17.05	23.16	17.45	22.85	17.85	22.54	18.26	22.21	18.64
30.00	24.27	17.63	23.96	18.05	23.64	18.47	23.32	18.88	22.98	19.28
31.00	25.08	18.22	24.76	18.65	24.43	19 08	24.10	19.52	23.74	19.93
32.00	25.89	18.81	25.56	19.26	25.22	19.69	25.88	20.15	24.51	20.57
33.00	26.70	19.40	26.36	19.86	26.00	20.31	25.65	20.78	25.28	21.21
34.00	27.51	19.99	27.15	20.46	26.79	20.93	26.43	21.41	26.04	21.86
35.00	28.32	20.58	27.95	21.06	27.58	21.54	27.21	22.03	26.81	22.50
36.00	29.12	21.17	28.75	21.66	28.37	22.16	27.98	22.66	27.57	23.14
37.00	29.93	21.75	29.55	22.27	29.16	22.77	28.76	23.29	28.34	23.79
38.00	30.74	22.34	30.35	22.87	29.94	23.39	29.53	23.92	29.10	24.43
39.00	31.55	22.93	31.15	23.47	30.73	24.00	30.31	24.55	29.87	25.07
40.00	32.36	23.51	31.95	24.07	31.52	24.63	31.09	25.17	30.64	25.71
41.00	33.17	24.10	32.74	24.67	32.31	25.24	31.87	25.81	31.40	26.36
42.00	33.98	24.69	33.54	25.27	33.10	25.86	32.64	26.44	32.17	27.00
43.00	34.79	25.28	34.34	25.88	33.88	26.48	33.43	27.07	32.93	27.64
44.00	35.60	25.87	35.14	26.48	34.67	27.09	34.20	27.70	33.70	28.28
45.00	36.41	26.45	35.94	27.08	35.46	27.70	34.97	28.33	34.47	28.93
46.00	37.21	27.04	36.74	27.68	36.25	28.32	35.75	28.96	35.23	29.57
47.00	38.02	27.62	37.54	28.28	37.04	28.94	36.52	29.59	36.00	30.21
48.00	38.83	28.21	38.33	28.89	37.82	29.55	37.30	30.22	36.76	30.86
49.00	39.64	28.80	39.13	29.49	38.61	30.17	38.08	30.85	37.53	31.50
50.00	40.45	29.39	39.93	30.09	39.40	30.78	38.86	31.47	38.30	32.14
Dist.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.
	54°		53°		52°		51°		50°	

	36°		37°		38°		39°		40°	
Dist.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.
51.00	41.26	29.98	40.73	30.69	40.19	31.40	39.63	32.09	39.06	32.79
52.00	42.07	30.57	41.53	31.29	40.98	32.01	40.42	32.72	39.83	33.43
53.00	42.88	31.16	42.33	31.90	41.76	32.63	41.19	33.35	40.60	34.07
54.00	43.69	31.74	43.13	32.50	42.55	33.24	41.96	33.98	41.36	34.71
55.00	44.50	32.33	43.93	33.10	43.34	33.86	42.74	34.61	42.13	35.36
56.00	45.30	32.92	44.72	33.70	44.13	34.47	43.51	35.24	42.89	36.00
57.00	46.11	33.50	45.52	34.30	44.92	35.09	44.29	35.86	43.66	36.64
58.00	46.92	34.09	46.32	34.90	45.70	35.71	45.07	36.50	44.43	37.28
59.00	47.73	34.68	47.12	35.51	46.49	36.32	45.85	37.13	45.19	37.93
60.00	48.54	35.27	47.92	36.11	47.28	36.94	46.63	37.76	45.96	38.57
61.00	49.35	35.86	48.72	36.71	48.07	37.55	47.41	38.39	46.72	39.21
62.00	50.16	36.44	49.52	37.31	48.86	38.17	48.19	39.01	47.49	39.86
63.00	50.97	37.03	50.31	37.91	49.64	38.78	48.96	39.64	48.26	40.50
64.00	51.78	37.61	51.11	38.52	50.43	39.40	49.74	40.27	49.02	41.14
65.00	52.59	38.20	51.91	39.12	51.22	40.02	50.51	40.90	49.79	41.79
66.00	53.39	38.79	52.71	39.72	52.01	40.64	51.29	41.53	50.55	42.43
67.00	54.20	39.38	53.51	40.32	52.80	41.25	52.07	42.16	51.32	43.07
68.00	55.01	39.97	54.31	40.92	53.58	41.87	52.85	42.79	52.08	43.71
69.00	55.82	40.56	55.11	41.53	54.37	42.48	53.63	43.42	52.86	44.36
70.00	56.63	41.15	55.90	42.13	55.16	43.10	54.41	44.05	53.62	45.00
71.00	57.44	41.73	56.70	42.73	55.95	43.71	55.18	44.68	54.38	45.64
72.00	58.25	42.32	57.50	43.33	56.74	44.33	55.95	45.31	55.15	46.28
73.00	59.06	42.91	58.30	43.93	57.52	44.95	56.73	45.94	55.91	46.93
74.00	59.87	43.50	59.10	44.53	58.31	45.56	57.50	46.57	56.68	47.57
75.00	60.68	44.08	59.90	45.14	59.10	46.18	58.28	47.20	57.44	48.21
76.00	61.48	44.67	60.69	45.74	59.89	46.79	59.06	47.83	58.21	48.86
77.00	62.29	45.26	61.49	46.34	60.68	47.41	59.84	48.46	58.98	49.50
78.00	63.10	45.85	62.29	46.94	61.46	48.03	60,62	49.09	59.74	50.14
79.00	63.91	46.43	63.08	47.54	62.25	48.65	61.40	49.72	60,51	50.77
80.00	64.72	47.02	63.88	48.14	63.04	49.26	62.18	50.35	61.28	51.42
81.00	65.53	47.60	64.69	48.75	63.83	49.88	62.95	50.98	62.04	52.07
82.00	66.34	48.19	65.49	49.35	64.62	50.49	63.73	51.61	62.81	52.71
83.00	67.15	48.78	66.29	49.95	65.40	51.10	64.50	52.24	63.57	53.36
84.00	67.96	49.37	67.09	50.55	66.19	51.71	65.28	52.86	64.34	54.00
85.00	68.77	49.96	67.89	51.15	66.98	52.33	66.06	53.50	65.10	54.64
86.00	69.57	50.55	68.68	51.75	67.77	52.95	66.84	54.13	65.87	55.28
87.00	70.38	51.14	69.48	52.36	68.56	53.56	67.62	54.76	66.64	55.93
88.00	71.19	51.72	70.28	52.96	69.34	54.18	68.40	55.39	67.40	56.57
89.00	72.00	52.31	71.08	53.56	70.13	54.79	69.18	56.01	68.17	57.21
90.00	72.81	52.90	71.88	54.16	70.92	55.41	69.95	56.64	68.94	57.65
91.00	73.62	53.48	72.68	54.76	71.71	56.03	70.72	57.27	69.70	58.50
92.00	74.43	54.07	73.47	55.36	72.50	56.65	71.49	57.90	70.47	59.14
93.00	75.24	54.66	74.27	55.97	73.28	57.26	72.27	58.53	71.23	59.79
94.00	76.05	55.25	75.07	56.57	74.07	57.88	73.05	59.16	72.00	60.43
95.00	76.86	55.84	75.87	57.17	74.86	58.49	73.83	59.79	72.76	61.07
96.00	77.66	56.43	76.67	57.77	75.65	59.10	74.62	60.42	73.53	61.71
97.00	78.47	57.02	77.47	58.37	76.44	59.71	75.40	61.05	74.30	62.36
98.00	79.28	57.60	78.27	58.98	77.22	60.33	76.18	61.68	75.06	63.00
99.00	80.09	58.19	79.06	59.58	78.01	60.95	76.95	62.31	75.83	63.64
100.00	80.90	58.78	79.86	60.18	78.80	61.57	77.72	62.93	76.60	64.28
Dist.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.
	54°		53°		52°		51°		50°	

	41°		42°		43°		44°		45°	
Diſt.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep
1.00	0.75	0.66	0.74	0.67	0.73	0.68	0.72	0.69	0.71	0.71
2.00	1.51	1.31	1.49	1.34	1.46	1.36	1.44	1.39	1.41	1.41
3.00	2.26	1.97	2.23	2.01	2.19	2.05	2.16	2.08	2.12	2.12
4.00	3.02	2.62	2.98	2.68	2.93	2.73	2.88	2.78	2.83	2.83
5.00	3.77	3.28	3.72	3.35	3.66	3.41	3.60	3.47	3.54	3.54
6.00	4.53	3.94	4.46	4.01	4.39	4.09	4.32	4.17	4.24	4.24
7.00	5.28	4.59	5.20	4.68	5.12	4.77	5.04	4.86	4.95	4.95
8.00	6.04	5.25	5.97	5.35	5.85	5.46	5.75	5.56	5.66	5.66
9.00	6.79	6.90	6.69	6.02	6.58	6.14	6.47	6.25	6.36	6.36
10.00	7.55	6.56	7.43	6.69	7.31	6.82	7.19	6.95	7.07	7.07
11.00	8.30	7.21	8.18	7.36	8.04	7.50	7.91	7.64	7.78	7.78
12.00	9.06	7.87	8.92	8.02	8.78	8.18	8.63	8.34	8.48	8.48
13.00	9.81	8.52	9.66	8.69	9.51	8.87	9.35	9.03	9.19	9.19
14.00	10.57	9.18	10.40	9.36	10.24	9.55	10.07	9.73	9.90	9.90
15.00	11.32	9.84	11.14	10.04	10.97	10 23	10.79	10.42	10.61	10.61
16.00	12.08	10.49	11.89	10.70	11.70	10.91	11.51	11.12	11.31	11.31
17.00	12.83	11.15	12.63	11.37	12.43	11.59	12.23	11.81	12.02	12.02
18.00	13.59	11.80	13.38	12.04	13.16	12.28	12.95	12.51	12.73	12.73
19.00	14.34	12.46	14.12	12.71	13.90	12.96	13.67	13.20	13.43	13.43
20.00	15.09	13.12	14.86	13.38	14.63	13.64	14.39	13.89	14.14	14.14
21.00	15.85	13.78	15.60	14.05	15.36	14.32	15.11	14.59	14.85	14.85
22.00	16.61	14.43	16.34	14.72	16.09	15.01	15.83	15.28	15.56	15.56
23.00	17.36	15.09	17.09	15.39	16.82	15.69	16.55	15.98	16.26	16.26
24.00	18.11	15.75	17.83	16.06	17.55	16.37	17.27	16.67	16.97	16.97
25.00	18.87	16.40	18.58	16.73	18.28	17.06	17.98	17.37	17.68	17.68
26.00	19.63	17.06	19.32	17.40	19.01	17.74	18.70	18.06	18.38	18.38
27.00	20.38	17.71	20.06	18.07	19.75	18.42	19.42	18.76	19.09	19.09
28.00	21.13	18.37	20.80	18.74	20.48	19.10	20.14	19.45	19.80	19.80
29.00	21.89	19.03	21.54	19.40	21.21	19.78	20.86	20.15	20.50	20.50
30.00	22 64	19.68	22.29	20.07	21.94	20.46	21.58	20.84	21.21	21.21
31.00	23.40	20.33	23.03	20.74	22.67	21.14	22.30	21.53	21.92	21.92
32.00	24.15	20.99	23.78	21.41	23.40	21.82	23.02	22.23	22.63	22.63
33.00	24.91	21.65	24.52	22.08	24.13	22.50	23.74	22.93	23.33	23.33
34.00	25.66	22.30	25.26	22.75	24.86	23.18	24.46	23.62	24.04	24.04
35.00	26.42	22.96	26.00	23.41	25.59	23.87	25.18	24.32	24.75	24.75
36.00	27.17	23.61	26.74	24.08	26 32	24.55	25.89	25.01	25.45	25.45
37.00	27.93	24.27	27.49	24.75	27.05	25.23	26.61	25.70	26.16	26.16
38.00	28.68	24.93	28.23	25.42	27.79	25.91	27.33	26.40	26.87	26.87
39.00	29.44	25.58	28.98	26.09	28.52	26.59	28.05	27.09	27.58	27.58
40.00	30.19	26.24	29.73	26.76	29.25	27.28	28.77	27.79	28.28	28.28
41.00	30.95	26.89	30.47	27.42	29.98	27.96	29.49	28.48	28.99	28.99
42.00	31.70	27.55	31.21	28.09	30.71	28.64	30.21	29.18	29.70	29.70
43.00	32.46	28.20	31.95	28.76	31.44	29.34	30.93	29.87	30.40	30.40
44.00	33.22	28.86	32.70	29.43	32.17	30.01	31.65	30.57	31.11	31.11
45.00	33.97	29.51	33.44	30.10	32.91	30.69	32.37	31.26	31.82	31.82
46.00	34.72	30.17	34.19	30.77	33.64	31.37	33.09	31.96	32.52	32.52
47.00	35.48	30.83	34.93	31.44	34.37	32.06	33.81	32.65	33.23	33.23
48.00	36.24	31.48	35.67	32.11	35.10	32.74	34.53	33.35	33.94	33.94
49.00	36.99	32.14	36.41	32.78	35.83	33.42	35.25	34.04	34.65	34.65
50.00	37.74	32.80	37.16	33.46	36.57	34.10	35.97	34.73	35.36	35.36
Diſt.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.
	49°		48°		47°		46°		45°	

	41°		42°		43°		44°		45°	
Diſt.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.
51.00	38.50	33.46	37.90	34.12	37.30	34.78	36.69	35.43	36.06	36.06
52.00	39.25	34.12	38.64	34.79	38.03	35.46	37.40	36.12	36.77	36.77
53.00	40.01	34.78	39.39	35.46	38.77	36.14	38.12	36.82	37.47	37.47
54.00	40.76	35.43	40.13	36.13	39.50	36.82	38.84	37.51	38.18	38.18
55.00	41.52	36.09	40.87	36.80	40.23	37.50	39.56	38.21	38.89	38.89
56.00	42.27	36.75	41.61	37.47	40.96	38.18	40.28	38.90	39.60	39.60
57.00	43.03	37.40	42.35	38.14	41.69	38.87	41.00	39.60	40.30	40.30
58.00	43.78	38.05	43.10	38.81	42.42	39.55	41.72	40.29	41.01	41.01
59.00	44.54	38.71	43.84	39.48	43.15	40.23	42.44	40.99	41.72	41.72
60.00	45.28	39.37	44.59	40.15	43.88	40.92	43.16	41.68	42.43	42.43
61.00	46.05	40.03	45.33	40.82	44.61	41.69	43.88	42.37	43.13	43.13
62.00	46.80	40.68	46.07	41.49	45.34	42.28	44.60	43.07	43.84	43.84
63.00	47.56	41.33	46.81	42.16	46.07	42.96	45.32	43.76	44.54	44.54
64.00	48.31	41.99	47.55	42.83	46.81	43.64	46.04	44.46	45.25	45.25
65.00	49.07	42.65	48.30	43.50	47.54	44.32	46.76	45.15	45.96	45.96
66.00	49.82	43.30	49.04	44.17	48.27	45.01	47.48	45.85	46.67	46.67
67.00	50.58	43.96	49.79	44.83	49.00	45.69	48.20	46.54	47.38	47.38
68.00	51.33	44.61	50.53	45.50	49.73	46.37	48.91	47.24	48.08	48.08
69.00	52.08	45.27	51.27	46.17	50.46	47.06	49.63	47.93	48.79	48.79
70.00	52.84	45.93	52.02	46.84	51.19	47.74	50.35	48.63	49.50	49.50
71.00	53.60	46.58	52.76	47.51	51.93	48.42	51.07	49.32	50.20	50.20
72.00	54.35	47.24	53.51	48.18	52.66	49.10	51.79	50.02	50.91	50.91
73.00	55.10	47.89	54.25	48.85	53.39	49.78	52.51	50.71	51.62	51.62
74.00	55.86	48.55	55.00	49.52	54.12	50.46	53.23	51.41	52.32	52.32
75.00	56.62	49.20	55.74	50.19	54.85	51.14	53.95	52.10	53.03	53.03
76.00	57.37	49.86	56.49	50.86	55.58	51.82	54.67	52.80	53.74	53.74
77.00	58.12	50.51	57.23	51.53	56.31	52.50	55.39	53.49	54.44	54.44
78.00	58.88	51.17	57.98	52.20	57.04	53.18	56.11	54.19	55.15	55.15
79.00	59.63	51.83	58.72	52.87	57.78	54.87	56.83	54.88	55.86	55.86
80.00	60.39	52.49	59.45	53.53	58.51	54.56	57.55	55.57	56.57	56.57
81.00	61.14	53.15	60.20	54.20	59.24	55.24	58.27	56.27	57.27	57.27
82.00	61.90	53.80	60.94	54.87	59.97	55.92	58.99	56.96	57.98	57.98
83.00	62.64	54.46	61.69	55.54	60.70	56.60	59.70	57.66	58.69	58.69
84 00	63.41	55.12	62.43	56.21	61.43	57.28	60.42	58.35	59.39	59.39
85.00	64.16	55.77	63.18	56.88	62.16	57.96	61.14	59.05	60.10	60.10
86.00	64.91	56.43	63.92	57.55	62.89	58.64	61.86	59.74	60.81	60.81
87.00	65.67	57.09	64 67	58.22	63.63	59.32	62.58	60.44	61.52	61.52
88.00	66.43	57.75	65.40	58.89	64.36	60.01	63.30	61.13	62.22	62.22
89.00	67.18	58.40	66.14	59.56	65.09	60.69	64.02	61.83	62.93	62 93
90.00	67.93	59 05	66.88	60.22	65.82	61.38	64.74	62.52	63 64	63.64
91.00	68.69	59.71	67.63	60.89	66.55	62.06	65.46	63.21	64.35	64.35
92.00	69.45	60.37	68.38	61.56	67.28	62.74	66.18	63.91	65.05	65.05
93.00	70.20	61.03	69.12	62.23	68.01	63.42	66.90	64.60	65.76	65.76
94.00	70.96	61.68	69.86	62.90	68.75	64.10	67.62	65.30	66.46	66.46
95.00	71.71	62.33	70.60	63.57	69.48	64.78	68.34	65.99	67.17	67.17
96.00	72.47	62.99	71.34	64.24	70.21	65.46	69.06	66.69	67.88	67.88
97.00	73.22	63.65	72.09	64.91	70.94	66.14	69.78	67.38	68.59	68.59
98.00	73.98	64.30	72.83	65.58	71.67	66.82	70.50	68.08	69.29	69.29
99.00	74.73	64 96	73.58	66.25	72.40	67.51	71.21	68.77	70.00	70.00
100.00	75.47	65.61	74.31	66.91	73.13	68.20	71.93	69.47	70.71	70.71
Diſt.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.
	49°		48°		47°		46°		45°	

IX. Points, Degrees and Minutes, of the Compaſs Card.

Points.	0.	1.	2.	3.	4.	5.	6.	7.
	D. M.	D. M.	D. M.	D. M.	D. M.	D. M.	D. M.	D. M.
Parts.	0. 0	11.15	22.30	33.45	45. 0	56.15	67.30	78.45
1.32d	0.21	11.36	22.51	34. 6	45.21	56.36	67.51	79. 6
1.16th	0.42	11.57	23.12	34.27	45.42	56.57	68.12	79.27
3.32ds	1. 3	12.18	23.33	34.48	46. 3	57.18	68.33	79.48
1.8th	1.24	12.46	23.55	35.10	46.25	57.40	68.55	80.10
5.32ds	1.45	13. 1	24.16	35.31	46.46	58. 1	69.16	80.31
3.16ths	2. 6	13.22	24.37	35.52	47. 7	58.22	69.37	80.52
7.32ds	2.27	13.43	24.58	36.13	47.28	58.43	69.58	81.13
1.4th	2.48	14. 4	25.19	36.34	47.49	59. 4	70.19	81.34
9.32ds	3.10	14.25	25.40	36.55	48.10	59.25	70.40	81.55
5.16ths	3.31	14.46	26. 1	37.16	48.31	59.46	71. 1	82.16
11.32ds	3.52	15. 7	26.22	37.37	48.52	60. 7	71.22	82.37
3.8ths	4.13	15.28	26.43	37.58	49.13	60.28	71.43	82.58
13.32ds	4.34	15.49	27. 4	38.19	49.34	60.49	72. 4	83.19
7.16ths	4.55	16.10	27.25	38.40	49.55	61.10	72.25	83.40
15.32ds	5.16	16.31	27.46	39. 1	50.16	61.31	72.46	84. 1
1 Half	5.37	16.52	28. 7	39.22	50.37	61.52	73. 7	84.22
17.32ds	5.58	17.13	28.28	39.43	50.58	62.13	73.28	84.43
9.16ths	6.19	17.34	28.49	40. 4	51.19	62.34	73.49	85. 4
19.32ds	6.40	17.55	29.10	40.25	51.40	62.55	74.10	85.25
5.8ths	7. 2	18.17	29.32	40.47	52. 2	63.17	74.31	85.47
21.32ds	7.23	18.38	29.53	41. 8	52.23	63.38	74.52	86. 8
11.16ths	7.44	18.59	30.14	41.29	52.44	63.59	75.13	86.29
23.32ds	8. 5	19.20	30.35	41.50	53. 5	64.20	75.34	86.50
3.4ths	8.26	19.41	30.56	42.11	53.26	64.41	75.56	87.11
25.32ds	8.47	20. 2	31.17	42.32	53.47	65. 2	76.17	87.32
13.16ths	9. 8	20.23	31.38	42.53	54. 8	65.23	76.38	87.53
27.32ds	9.29	20.44	31.59	43.14	54.29	65.44	76.59	88.14
7.8ths	9.51	21. 6	32.20	43.36	54.51	66. 6	77.21	88.36
29.32ds	10.12	21.27	32.41	43.57	55.12	66.27	77.42	88.57
15.16ths	10.33	21.48	33. 2	44.18	55.33	66.48	78. 3	89.18
31.32ds	10.54	22. 9	33.23	44.39	55.54	67. 9	78.24	89.39

For 10ths of a 32d of a Point,	1.	2.	3.	4.	5.	6.	7.	8.	9 Tenths.
Add Minutes of a Degree,	2.	4.	6.	8.	11.	13.	15.	17.	19 Minutes.

X. Moon's Alt. and Parallax in Alt.

D.	M.	M.	M.	M.	M.	M.	M.	M.	M.
0	54	55	56	57	58	59	60	61	62
10	53	54	55	56	57	58	59	60	61
20	51	52	53	54	55	55	56	57	58
30	47	48	48	49	50	51	52	53	54
40	41	42	43	44	44	45	46	47	47
50	35	35	36	37	37	38	39	39	40
60	27	27	28	28	29	29	30	30	31
70	18	19	19	19	20	20	20	21	21
80	9	10	10	10	10	10	10	11	11

XI. Moon's Hor. Par.	Diam.	Semidi.
M.	M. S.	M. S.
54	29.26	14.43
55	29.58	14.59
56	30.31	15.15
57	31. 4	15.32
58	31.37	15.48
59	32. 9	16. 5
60	32.42	16.21
61	33.19	16.37
62	33.47	16.53

XII. To the Common Logarithm of the Moon's Horizontal Diameter, in Seconds, add *0.2636; the Sum is the Common Logarithm of the Horizontal Parallax in Seconds.

* The Conſtant Ratio of one to the other.

☞ In order to take the Moon's Horizontal Parallax; I repeatedly took the Horizontal Diameter, and (by my Method of getting a true Medium, in taking the Diſtance of Sun and Moon's Limbs) the Moon's Diameter differed but a few Seconds of a Degree from the beſt Predictions. Conſequently, by this Method, the Horizontal Parallax may frequently be taken, accurately enough for important Caſes in Nautical Aſtronomy.

S. DUNN.

March 7th, 1785.

The End.

MVSEVM BRITANNICVM